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ABSTRACT

The impact of the Middle Income Student Assistance Act (MISAA) program was evaluated through analysis of financial aid to cohorts of students before and after MISAA, a longitudinal examination of a sample of students before and after its enactment, and a macro-level analysis of the effect of MISAA on the relationship between income and aid. The sample of 4,092 students at 91 four-year colleges and universities were surveyed before (1978-79) and after (1979-80) enactment. It was determined that MISAA's impact was not uniformly felt across the various levels of student income: there was a greater impact upon middle-income students than upon low-income and upper-income students. This result was due primarily to the increased availability of Basic Educational Opportunity Grants: the percentage of recipients and the average awards increased. There was also a systematic tendency for middle-income and upper-income students to receive a greater number of awards from Guaranteed Student Loan and College Work Study programs after MISAA was introduced than in the prior year. A trend toward a reduction in the proportion of National Defense Student Loan recipients among low-income and middle-income students was observed. It is concluded that the federal assistance programs were able to reach a broader spectrum of students after enactment of MISAA while still maintaining the federal government's commitment to low-income students. The MISAA caused a change in the distributional pattern of awards as well as a change in the amount of aid to recipients. Information is presented on the research methodology, and sample survey instruments are included. (SW)

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STUDY OF PROGRAM MANAGEMENT PROCEDURES IN THE CAMPUS BASED AND BASIC GRANT PROGRAMS (G-129)

FINAL REPORT

MISAA IMPACT ANALYSIS

September 1980

U.S. EDUCATION DEPARTMENT
Office of Program Evaluation
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Dear Dr. Corrallo:

Applied Management Sciences is pleased to submit 100 copies of its MISAA Impact Analysis report. If you have any questions, please contact Dr. Robert Deane.

Sincerely,

APPLIED MANAGEMENT SCIENCES, INC.

mdy for Todd S. Tucker

Todd S. Tucker, Ph.D.
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PREFACE

The results presented in this report were based upon unweighted analyses. Although the data file for the study contained sampling weights which permitted the estimation of population parameters, these sampling weights were not employed for two reasons. Firstly, an empirical examination of the distribution of aid by income class revealed that there were only minimal differences in outcomes using the weighted versus the unweighted data. Empirical comparison also indicated that relationships among selected variables were invariant across the two approaches. Secondly, the use of the weights for analytical computations resulted in a greater percentage of missing cases. This outcome was due to the fact that students in schools with high nonresponse weights were also more likely to have partial responses on their records. Thus, since these cases were assigned greater weights to adjust for higher non-response rates, the weighted data appeared to contain more cases with missing values on some of the outcomes.

Since the results were reasonably consistent across the weighted and unweighted analyses, and since the weighted analyses yielded a higher percentage of cases with missing values, unweighted analyses were utilized in this study. A description of the size and characteristics of the sample is presented in Chapter 2.

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INTRODUCTION

THE MIDDLE INCOME STUDENT ASSISTANCE ACT

The major goal of the Federal financial assistance programs is the removal of financial barriers which might otherwise deter an individual from the pursuit of education or training beyond high school. Among middle-income students, however, there is a rather pervasive perception that this goal has not been actualized. In previous research conducted by Applied Management Sciences,[1] we presented anecdotal information which reflected this basic belief. As one student explained, ". . . the way the system is set up now, the rich can pay, the 'poor' get paid for, and the middle class struggle to get what (they) can from wherever (they) can."[2] The empirical results from the same study revealed that these perceptions were not unfounded, but, in fact, based upon reality. These results indicated that, while the relationship between aid and income is negative, as would be expected, middle-income students receive less aid than would be consistent with the overall relationship. As a result of this "middle-income dip" in the allocation of financial assistance, family incomes provided little in the way of discretionary resources for these students, while often being too high to qualify them for grant support; thus, middle-income students were left in the difficult position of having to assume a larger loan-work burden and/or a greater unmet need than students in other income groups.

In response to the rapidly escalating costs of education and the increasing financial burdens imposed upon middle-income families, the Carter Administration proposed the Middle Income Student Assistance Act

(MISAA), which was passed by the 95th Congressional Session and signed into law by the President on November 1, 1978 (P.L. 95-566). As President Carter explained[3/] in announcing the proposal:

> Today the cost of sending a son or daughter to college is an increasingly serious burden on America's low- and middle-income families. From 1967 to 1976, in just a ten year period, the cost of a college education increased 77 percent.
>
> This year the average bill for tuition, room and board in a private college is more than $4,800 and in a typical public university a student would have to pay $2,500 per year for education-related costs.
>
> . . . Increasingly, middle-income families, not just the lower-income families, are being stretched to their financial limits by these new and growing costs of a university or college education. No one should be denied the opportunity for a college education for financial reasons alone. And our Nation has long recognized our obligation to help lower income families in this educational area.
>
> Now we must increasingly take steps to help middle income families as well.

The intent of MISAA was to promote increased accessibility to higher education through existing Federal aid programs. Its enactment "represents the biggest single infusion of funding for middle-income college students since the adoption of the GI bill at the end of World War II."[4/] This increased commitment to middle-income students, however, was not made at the expense of low-income students; for MISAA has not only increased the level of support to middle-income students, but also the support to low-income students.

PROVISIONS OF MISAA

MISAA constitutes a package of revised appropriations and awarding formulae, based on varying levels of assistance to accommodate different economic circumstances, for the existing Basic Grant, Campus Based, and Guaranteed Student Loan programs. The bill creates no new programs or bureaucracies but works within the framework of the existing Federal programs to achieve a more equitable distribution of financial assistance. The following discussion highlights the major provisions of MISAA.

Basic Grants (BEOG)

- Changes the percent of discretionary income that a family is expected to contribute to their child's education to 10.5 percent. Families were previously expected to contribute 20 percent of their first $5,000 and 30 percent of additional discretionary income for this purpose.
- Provides for more generous treatment of self-supporting (independent) students. Specifically, the bill increases the subsistence offset for single independent students from $1150 to $3400. Additionally, the bill requires that independent students with one or more dependents receive the same treatment as families with dependent students in determining the amount of money from their assets which they are expected to contribute to the cost of education.
- Increases the protection for low-income students in the event of less than full funding of the BEOGs program by revising the schedule for reduction of grants so that it is more heavily weighted in favor of the most needy students.
- The above changes brought in about 1 million more recipients in 1979-80 than 1978-79.

Supplemental Grants (SEOG)

- Sets an FY 80 minimum funding of $340 million for academic year 1979-80 as compared to $270 million for 1978-79.

College Work Study (CWS)

- Sets an FY 80 minimum funding of $500 million. The FY 79 appropriation of $550 million for academic year 1979-80 as compared to $435 million for 1978-79.

State Student Incentive Grants (SSIG)

- Revises current law so that states with constitutional prohibitions against funding private institutions can participate in this program. Specifically, this provision permits states with constitutional prohibitions against financial assistance for attendance at religious or other nonprofit or private institutions to be excepted from the SSIG requirement that the state's program must serve nonprofit private, as well as public, institutions.

Guaranteed Student Loan Program (GSL)

- Provides that all students receiving Guaranteed Student Loans be eligible for a Federal interest subsidy while they are in school, regardless of family income. This provision supercedes the provision in current law, which generally

provides that students with family incomes under $25,000 (i.e., adjusted gross incomes of around $31,000) be eligible for this subsidy.

- Provides that disabled students in approved rehabilitation training programs be permitted to defer payment of their loans while in training.

Other Provisions of the Bill

- Waives the age requirement for veterans participating in Special Programs for the Disadvantaged Backgrounds.
- Permits educational expenses for dependent children in elementary and secondary schools to be considered in computing financial need in the College Work-Study and in the National Direct Student Loan programs.
- Modifies the eligibility requirements for the participation of proprietary schools in programs funded under the Higher Education Act. This amendment conforms the eligibility requirement for proprietary schools to the requirement now applicable to public and nonprofit private schools, by permitting proprietary schools which admit nonhigh school graduates beyond the age of compulsory school attendance to be eligible for Higher Education Act funds.

In summary, MISAA was specifically created to target increased financial assistance to hard-pressed middle-income students, while maintaining the Federal Government's original commitment to low income students.

PURPOSE OF THIS STUDY

The purpose of this study was to gauge the success of MISAA in achieving the objectives outlined above. In order to accomplish this task, it was necessary to examine the conditions affecting the target population, and their corresponding outcomes, both before and after the enactment of the legislation. The sample employed in the analysis consists of 4092 students at a total of 91 four-year colleges and universities who were surveyed both before (1978-79) and after (1979-80) enactment.

The central focus of this analysis was upon the relationship between income and the receipt of financial aid, since this relationship was the explicit focus of the program itself. The pattern of BEOG awards was of particular interest, since the BEOG program represents the primary thrust

of financial aid for higher education. In addition, the broader pattern of financial aid was described, by expanding the set of determinants to include sex, race, class level, and income, as well as examining the pattern of SEOG, NDSL, CWS, and GSL awards. Thus, the focus of the study was not merely upon isolated components of financial aid for each program, but also upon the total package of aid to students. In this manner, we have attempted to examine the total impact of MISAA upon financial assistance in general, as well as upon the specific programs.

OVERVIEW OF THE REPORT

This report consists of three remaining chapters. In Chapter 2, we outline the methodology employed in our analysis. This methodology is a variation of a quasi-experimental design, with an examination of the effect of MISAA on a group of students surveyed both before and after its enactment.

In addition, the survey on which the study was based is described in Chapter 2. Chapter 3 contains the empirical results of the analysis, including an examination of the effects of MISAA on the aid received by the same individuals in each survey year, the effects of MISAA on awards to aggregated segments of the survey sample and to the entire sample, and a comparison of aid received by sample cohorts (e.g., sophomores) before and after enactment. In Chapter 4, we provide a synthesis of the empirical results and suggest some implications on the impact of MISAA.

END NOTES

1/ Applied Management Sciences, Study of Program Management Procedures in the Campus Based and Basic Grant Programs, Stage II Final Report. Volume II: Who Gets Financial Assistance, How Much, and Why? May 1980, prepared for the U.S. Education Department under Contract Number OE 300-77-0498.

2/ Ibid.

3/ U.S. Code Congressional and Administrative News. 95th Congress, St. Paul, MN: West Publications, 1978, pp. 5315-5316.

4/ Ibid. p. 5316.

2

STUDY METHODOLOGY

INTRODUCTION

The impetus for this study was provided by the results of Phase II of the U.S. Office of Education's[1] "Study of Program Management Procedures in the Campus Based and Basic Grant Programs" (SISFAP III), conducted in the Winter and Spring of 1979. Designed to evaluate institutional and Federal administrative policies and procedures as they influence the extent to which the programs are fulfilling their legislative goals, this earlier undertaking collected data from approximately 12,000 aid recipients and 4,000 nonrecipients at 172 postsecondary institutions.[2] The present study, conducted in 1979-80, was designed to assess the impact of MISAA by resurveying a sample of recipients and nonrecipients from the prior study. The data collected in the baseline survey, then, may serve as a pretest, in that it was conducted immediately prior to the introduction of MISAA, and the data collected in the resurvey serves as a posttest, in the evaluation of the legislation's effectiveness.

SELECTION OF INSTITUTIONS AND STUDENTS

In order to enhance the cost and efficiency of the sampling plan, a high probability subsample from the original (baseline) sample was selected, consisting of freshmen, sophomores, and juniors from the four year institutions in the original sample. This subset of the original sample was selected due to the fact that the probability of reselecting the original students within these schools would be significantly greater

than resampling students in two-year and proprietary institutions. The turnover or attrition rate among proprietary and two-year institutions was simply too great to justify the inclusion of these students in the resurvey group.

A total of 4,092 students in 91 four-year institutions from the first year were resurveyed in the second year. Of the 91 institutions, 47 were public and 44 were private. Tables 2.1.A and 2.1.B provide a breakdown of the demographic characteristics of the students in the public and private schools, respectively.

Although there are a total of 4,092 students in the sample, the demographic breakdown of the sample resulted in a loss of 95 cases. This reduction is due to the fact that 95 students did not provide any information on dependency status. While the demographic breakdowns do not contain every student in the sample, they nevertheless provide a rather complete description of the sample. As Tables 2.1.A and 2.1.B indicate, the majority of students in the sample were dependent and white. Due to the low number of independent students and the relative small number of students in some of the minority ethnic groups, we have adopted the following strategy in analyzing and reporting the data in all subsequent tables throughout this report. Firstly, independent students were not studied as a separate group. In all analyses, they were simply combined with dependent students. Secondly, for purposes of analysis, ethnic group membership was recoded to represent three groups: 1) Whites; 2) Blacks; and 3) Others. "Others" represents the combination of three groups: 1) American Indian or Alaskan Native; 2) Asian or Pacific Islander; and 3) Hispanic. The ethnic group reclassification resulted in larger cell sizes that could be subjected to analysis.

TABLE 2.1.A: DEMOGRAPHIC CHARACTERISTICS OF SURVEYED STUDENTS FROM FOUR-YEAR PUBLIC SCHOOLS

Dependency Status/Ethnicity	Sex		
Dependent	**Male**	**Female**	**Total**
American Indian or Alaskan Native	8	9	17
Asian or Pacific Islander	15	9	24
Black, not Hispanic	82	127	209
Hispanic	31	48	79
White, not Hispanic	568	600	1,168
Unknown	64	41	105
Total	768	834	1,602
Independent	**Male**	**Female**	**Total**
American Indian or Alaskan Native	3	3	6
Asian or Pacific Islander	6	4	10
Black, not Hispanic	19	39	58
Hispanic	11	8	19
White, not Hispanic	126	142	268
Unknown	14	22	36
Total	179	218	397

TABLE 2.1.B: DEMOGRAPHIC CHARACTERISTICS OF SURVEYED STUDENTS FROM FOUR-YEAR PRIVATE SCHOOLS

Dependency Status/Ethnicity	Sex		
Dependent	Male	Female	Total
American Indian or Alaskan Native	5	6	11
Asian or Pacific Islander	17	13	30
Black, not Hispanic	62	150	212
Hispanic	24	18	42
White, not Hispanic	652	696	1,348
Unknown	44	43	87
Total	804	926	1,730
Independent	Male	Female	Total
American Indian or Alaskan Native	4	4	8
Asian or Pacific Islander	7	3	10
Black, not Hispanic	22	20	42
Hispanic	6	7	13
White, not Hispanic	102	78	180
Unknown	8	7	15
Total	149	119	268

SURVEY INSTRUMENTS

The following instruments were administered as a part of the data collection effort:

- Student Questionnaire: Mail survey form designed to yield information on the equity of the distribution of aid to students and other impacts relative to institutional operating procedures.
- Record Review Form (no respondent): Field personnel transcribed data from the financial aid records of those students who participated in the survey and who were also aid recipients or applicants.

These two instruments are presented in Appendix A. The site visit logistics are described in the attachment to this chapter.

EVALUATION DESIGN AND METHODOLOGY

Since MISAA was introduced in the interim period between the two data collection efforts, its enactment can be viewed as the introduction of a controlled "treatment." The measurement of the same individuals immediately prior to and after the treatment intervention yielded a variation of the classical quasi-experimental design, the untreated control group design with pretest and posttest measures. The essential features of this type of design are diagrammed below:

FIGURE 2.1: UNTREATED CONTROL GROUP DESIGN WITH PRETEST AND POSTTEST

Treatment Group:	O_1	X	O_2
Control Group:	O_1		O_2

NOTE: O: stands for an observation
X: represents a treatment
- - -: the dashed line indicates that the two groups were not randomly formed

The design depicted in Figure 2.1 attempts to detect differences between two separate, intact groups on the posttest (O_2) and causally attributes the difference to the treatment. Due to the nature of the treatment (MISAA) in our study, it is not possible to examine separate, intact groups to which the treatment is either applied or withheld. MISAA is not an "all or none" intervention which is restricted exclusively to one group of students, but affects all students, each to a different degree. While it is designed primarily to benefit middle-income students, its impact is also spread across low- and upper-income students. The three income levels have been operationally defined as encompassing the following boundaries: 1) low-income--$11,999 and below; 2) middle-income--$12,000 to $24,999; and 3) upper-income--$25,000 and above. For independent students, income reflects their own annual income, whereas for dependent students, income represents parental annual income. Consequently, instead of having separate groups which either receive the treatment (MISAA) or do not, our design contains three groups which are differentially influenced by MISAA. Figure 2.2 represents the design which will be employed in the present study.

FIGURE 2.2: QUASI-EXPERIMENTAL DESIGN FOR THE ASSESSMENT OF MISAA

Low-Income Students:	O_1	x	O_2
Middle-Income Students:	O_1	X	O_2
Upper-Income Students:	O_1	x	O_2

NOTE: O: stands for an observation
X: represents a treatment
x: represents the leakage of a treatment across groups
- - -: the dashed line indicates that the groups were not randomly formed

As Figure 2.2 indicates, none of the groups serves as a control group in the strict sense; however, the two groups to which MISAA is not primarily intended do serve as comparison groups, upon which the impact of MISAA can be assessed.

The difficulty in inferring causality in any quasi-experimental design stems from the basic limitation that the groups are neither randomly formed nor randomly assigned to the different conditions. Instead, the comparisons are based on non-equivalent groups that may differ in many ways other than the presence of a treatment; thus, the effects of the treatment must be isolated from those due to the initial differences between the groups and from differences arising from concurrent influences.

In an effort to control for as many of these other factors as possible, we conducted a multi-faceted analysis which should enable us to "triangulate" the effects of MISAA. The data in this design permitted three general modes of analyses:

(1) the comparison of similar cohorts (e.g., sophomores in 1978-79 versus sophomores in 1979-80) at two points in time.

(2) the comparison of the same group of students at two points in time (longitudinal); and

(3) the macro-level comparison of aided (middle-income) students and nonaided (low- and upper-income) students at the two points in time.

In each of the analyses, we employed a strategy of proposing differential predictions for each dependent variable. As Cook and Campbell (1979) argue:

> The probability of ruling out threats (to the validity of the analysis) depends in part on the specificity of the predicted data pattern so that interpretability increases (1) with the number of dependent variables for which predictions are made -- and (2) with the specificity of numerical or sign predictions made.[3]

Thus, a set of a priori hypotheses were employed in the analyses. The degree to which the results corroborate the expected pattern of intended effects determines the level of confidence we can place in eliminating the various threats which plague quasi-experimental studies.

The first area of analysis involved the examination and comparison of cohorts in each of the two sampling groups. This type of analysis depends upon the fact that individuals pass through institutions in regular patterns. A point in the cycle can be identified (e.g., a

specific class level), and individuals or groups can be studied as they pass this point in the cycle, thereby rendering them comparable. The weakness in this approach stems from the fact that the pretest cohort members are last year's cohort, and the posttest cohort are this year's; thus, history presents a threat to the validity of the study. In other words, anything that might have happened between the two cohorts is likely to have been experienced by one and not the other. Specifically, the difference in cohort characteristics would be an alternative, or rival, explanation for any observed difference in effect that we would like to attribute to the treatment.

This potential problem, however, was minimized by the fact that we made differential predictions across ranges or categories of the treatment. If we predict one effect for one part of the posttest cohort and another effect for a different part of the posttest cohort, it becomes difficult for extraneous differences between pretest and posttest cohorts to explain these differences in effect. For example, since MISAA is directly targeted toward middle-class students, we would predict that the greatest gain in the percentage of recipients would occur for middle-income students within the cohort groups on BEOG awards. Thus, we would expect a significantly greater gain in the percentage of middle-class BEOG recipients in each cohort group than low-income and upper-income students. Likewise, as with the analysis on the same students (the second area of analysis), it is possible to test for differential gains in the awarding of aid across income levels of the cohort groups.

The second area of analysis focuses upon the comparison of the effects of MISAA on the same students across the two points in time; thus it can be viewed as a longitudinal approach. Analysis of variance and analysis of covariance procedures were utilized in the analysis to ascertain which variables accounted for the difference in the amount of awards among students from the pretest to the posttest. Both modes of analyses permitted an examination of differences on the posttest, while analysis of covariance enabled us to control for initial differences on

the pretest. These methods enabled us to examine possible interactions among the sets of variables. In addition, the change in the percentage of recipients and nonrecipients over both years was examined. Using this approach, we can detect how many more students were assisted with financial aid after MISAA was introduced and the nature of the change.

To conduct the macro-level comparison, a series of analyses were employed to test for differences among the groups on the different aid programs at the two points in time. If the MISAA program is effective, the disparity among the groups should be significantly less across the posttest outcomes than across the pretest outcomes. For example, since MISAA is aimed at reducing the difference in the amount of BEOG awards among the three groups of students, this difference should be significantly smaller for the posttest (after the enactment of MISAA) than for the pretest (before MISAA) group. First, to test the overall impact of MISAA across the entire income range, a simple bivariate regression analysis was conducted for each year across the different financial aid programs. One would expect to find that, as income increases, the amount of aid decreases, and at some point it stops. Presumably, the curve should be continuous until the cut-off point. The results of the pre-MISAA analysis, however, indicated a "gap" in the relationship, into which the middle income student fell. Having discovered this discontinuity in the 1978-79 (pretest) data, the hypothesized effect of the treatment (MISAA) to be tested with the 1979-80 (posttest) data is greater continuity in the distribution of aid.

This three-tiered mode of analysis permits a very rigorous use of the quasi-experimental design. The results of this analytical approach are presented in the next chapter. The research questions and hypotheses which will be addressed in the analyses are presented in the following discussion according to the three general modes of analysis.

RESEARCH QUESTIONS AND HYPOTHESES

Within each of the three modes of analysis, two major research questions were addressed. Based upon the intended impact of MISAA, several a priori research hypotheses were generated for each question. On those outcomes where specific predictions were made, the analyses employed one-tailed tests of significance, whereas on those outcomes which were not predicted, two-tailed tests of significance were employed since the direction of effects were not specified. The questions and research hypotheses are presented below.

- Cohort Analysis

  I. Are there any differences in the proportion of recipients across the Federal financial assistance programs from 1978-79 to 1979-80?

     1. There will be a significant increase in the proportion of BEOG and GSL recipients cohorts.
     2. Within each cohort group, there will be a significant increase in the proportion of BEOG and GSL recipients among the middle- and upper-income level students.
     3. There will be a significant increase in the proportion of recipients of any form of Federal financial assistance.

  II. Are there any differences in the average award across Federal financial assistance programs from 1978-79 to 1979-80?

     1. There will be a significant increase in the average award across cohort groups on BEOG, SEOG, CWS, and GSL.
     2. Within each cohort group, there will be a significant increase in the average award on BEOG, SEOG, CWS, and GSL among the middle- and upper-income level students.
     3. There will be a significant increase in the average total award across cohort groups.

- Longitudinal Analysis

  I. Do more people become recipients of the various financial aid programs after the introduction of MISAA than before its enactment?

     1. There will be a significant increase in the percentage of BEOG and GSL recipients.
     2. Across the three income levels, there will be a significant increase in the percentage of middle- and upper-income BEOG and GSL recipients.

3. There will be a significant increase in the percentage of recipients of any form of Federal financial aid after the introduction of MISAA.

II. Are there any differences in the average award gains across the various financial aid programs?

1. There will be a significant gain in the average award across the same recipients on BEOG, SEOG, CWS, and GSL.

2. Across the three income levels, the gains on BEOG and GSL among middle- and upper-income students will be significantly greater than the gains among low-income students.

3. There will be a significant increase in the average total award from the year prior to MISAA to the year after its introduction.

- Macro-Level Analysis

I. Are the differences in the probability of receiving an award across the various levels of student income greater in the baseline year than in the resurvey?

1. The differences in the probability of award across student income levels will be less variable for BEOG awards in the resurvey year over the baseline survey.

2. There will be a significant increase in the probability of receipt of a BEOG and GSL award among middle- and upper-income students in the resurvey year over the baseline survey.

3. There will be a significant increase in the probability of an award from any type of Federal financial aid for students in the resurvey over the baseline survey.

II. Does the per capita availability of Federal financial support change from the baseline year to the resurvey?

1. The per capita availability of all Federal financial aid programs, except NDSL, will be greater for students in the resurvey over students in the baseline survey.

2. The per capita availability of all Federal financial aid programs except NDSL will increase for middle- and upper-income students than for low-income students.

3. The per capita availability of the total amount of aid will be greater for students in the resurvey than for those in the baseline.

ATTACHMENT TO CHAPTER 2

- Pre-site Visit Logistics
- Selection and Training of Interviewers
- Implementation of the Site Visits
- Implementation of the Student Mail Survey
- Procedures to Edit and Code Completed Instruments
- Creation of Data Files

PRE-SITE VISIT LOGISTICS

A host of activities were undertaken in preparation for the site visits. The first point of contact with the schools was accomplished via a letter sent to the president and the director of financial aid at each institution. These letters explained the purpose of the study, informed them of the length of time required for the site visit, and invited their cooperation. Approximately four days after the letters were mailed, initial telephone calls were placed to each school. These calls centered on:

- ascertaining their willingness to participate;
- identifying an on-site coordinator;
- indicating that a two-day site visit would be conducted between September and December in order to transcribe data from students' financial aid records;
- obtaining information on vacation periods and other school closings; and
- if the school was a replacement site, information was also gathered on: a) their undergraduate enrollment attending one-half time or more; and b) the proportion of these students receiving any form of financial aid.

Following these calls, preliminary travel swings were developed. Two to three sites per week were scheduled (at one to two days per site), with one day in between to allow for sufficient travel time.

With this activity completed, a memorandum was mailed to each school, ascribing a tentative visit date and describing procedures for selecting the required student samples. If the institution was a four-year school which participated in the baseline study, a listing of students from whom data were collected during the initial effort was enclosed to facilitate the school's identification of those students who were still in attendance. In addition, the procedures for selecting a random sample of replacement students were also delineated. (A copy of this memorandum is provided in Appendix B). Finally, all schools were requested to provide Applied Management Sciences with the names and current addresses of the students in the sample at their earliest convenience in order to implement the student mail survey.

Following the above activity, second-round telephone calls were placed to the coordinators to confirm or reschedule the assigned site visit date and to answer any questions pertaining to the selection of the student sample. At the conclusion of these calls, final travel swings were developed to accommodate individual institutional scheduling, and all necessary travel arrangements were made. Next, Record Review Forms were sorted for each school and mailed to the coordinator in preparation for the site visits.

Immediately prior to the conduct of the site visits, the field staff reconfirmed all interview dates with the coordinators at their sites. Further, reconfirmation was again made just before the interviewers' arrival at the various institutions during the course of the site visit cycle.

SELECTION AND TRAINING OF INTERVIEWERS

Concurrent with the above activities, efforts were undertaken to recruit qualified interviewers. The first step entailed contacting all interviewers who served on the baseline study to ascertain their availability and interest in the current undertaking. Of these, three agreed to serve in this capacity. Next, an advertisement was placed in the Washington Post for the remaining site visit staff. Upon reviewing the applicants' resumes, interviews were conducted with those whose backgrounds were most closely aligned with the needs of the survey. A total of seven additional interviewers were then hired.

Occurring simultaneously with the selection of interviewers was the redevelopment of the Interviewer's Training Manual, a document which was initially designed for the baseline study and which served as an instructional guide in preparing for and conducting the site visits. To ensure that the site visits would proceed smoothly and yield complete and accurate data, the manual addressed each of the following areas: a) the background and purpose of the study; b) an overview of the Federally-funded student financial assistance programs; c) general interview instructions; d) detailed on-site instructions; and e) indepth question-by-question instructions for the proper use of the survey forms.

Following the development of this document, copies were mailed to the field personnel to facilitate their proficiency in each of the above-mentioned areas.

Beginning September 25, 1979, a four-day training session in the conduct of the survey and the use of the instruments was held. The focus of this training was on the scope of the study and the issues under consideration; familiarization with the questionnaires; student sampling procedures; interviewing techniques; and travel procedures. As part of this training effort, site visits were conducted at two local schools in order to provide the field staff with a clear picture of how the actual field work would proceed. Further, this approach enabled them to anticipate potential problems and ways to resolve them.

Immediately following training, site visits to the 174 institutions were conducted by 10 interviewers beginning October 1, 1979.

IMPLEMENTATION OF THE SITE VISITS

Throughout the conduct of the site visits, the field staff reported to the Applied Management Sciences' Field Supervisor at least once per site to relay any difficulties and discuss their resolution. Upon arrival at each site, the interviewer met with the coordinator to determine how to access the students' financial aid records for the purpose of transcribing data onto the Record Review Form. Next, a brief interview was conducted with the financial aid officer to obtain information on the institution's packaging policy and practices. The primary thrust behind collecting this information was to be able to attribute changes in student aid packages to modifications in the school's packaging philosophy from the preceding year as opposed to ascribing such differences to the enactment of MISAA. After these activities had been completed, site visit packages were mailed to Applied Management Sciences. Following the receipt of these packages, a letter thanking the institution for its participation was mailed, along with a $100.00 check.

IMPLEMENTATION OF THE STUDENT MAIL SURVEY

The student mail survey was conducted with the overall objective of maximizing the student response by permitting students to respond at their leisure. As such, it was implemented in three waves, with the last two serving as follow-ups for nonrespondents.

As the first step in executing the mail survey, each institution was requested to provide Applied Management Sciences with the names and current addresses of the sampled students at their earliest convenience. During the first month of the study, each school with an outstanding sample was contacted in order to accelerate this effort. In some cases, implementation of the survey was delayed as the schools were late in selecting the samples and forwarding the required information. Moreover, a number of schools did not select the student sample until the arrival of the field staff which further inhibited the progress of the mail survey.

Upon receiving the students' names and current addresses, four sets of labels for each student were generated (one set for each wave of mailing (3) and one set for check payment). The first mailing consisted of the questionnaire, a cover letter urging the student's participation (see Appendix A for copies of the survey instrument and all follow-up letters), and a prepaid return envelope. Each student was assigned a unique numerical code which was recorded on the survey form in order to identify his/her response. Approximately three weeks after the questionnaires were mailed, a reminder letter (second wave) was sent to each nonresponding student. This was done again after another three weeks had elapsed (third wave). As an additional measure for enhancing the student response, an announcement was prepared for posting on bulletin boards and/or publication in the institution's student newspapers (see Exhibit 2.1.).

A master file of the student mail survey was created to monitor outgoing and returning survey forms, as well as check payments. Incoming questionnaires were filed, by institution and form type (i.e., Financial Aid Officer Questionnaire, Record Review Form, and Student Questionnaire) for easy access.

EXHIBIT 2.1: STUDENT MAIL SURVEY ANNOUNCEMENT

THE KEY TO IMPROVING FINANCIAL AID

DID YOU RECEIVE A QUESTIONNAIRE IN THE MAIL ON HOW YOU ARE FINANCING YOUR EDUCATION? THE SUCCESS OF OUR SURVEY REQUIRES YOUR RESPONSE WHETHER YOU ARE RECEIVING FINANCIAL AID OR NOT. WE NEED YOUR HELP! THE THREE KEYS TO IMPROVING FINANCIAL AID ARE:

1 — FILL OUT THE QUESTIONNAIRE

(Completely and accurately. Include any other comments you would like to make.)

2 — RETURN IT

(Do not remove the cover letter. Keep identifying codes intact.)

3 — COLLECT YOUR $3.00

(Upon receipt of your completed questionnaire, Applied Management Sciences will mail you a check for $3.00 as compensation for your time and assistance.)

IF YOU HAVE ANY QUESTIONS OR NEED A NEW QUESTIONNAIRE, PLEASE CALL:

WENDY DELLEFIELD AT: 800-638-2784 OR 800-638-2785

962 Wayne Avenue • Suite 701
Silver Spring, Maryland 20910

EDIT AND CODE COMPLETED INSTRUMENTS

As the survey forms were received, they were edited and coded for keypunch entry to data tape using previously defined edit specifications for each type of form (i.e., Record Review Form and Student Questionnaire). All data were processed by applying the following procedures:

- forms were manually edited by examining item responses for inconsistencies or incomplete answers. Appropriate codes were ascribed for these and for open-ended questions;
- logged-out forms to keypunch with an updated count of completed documents;
- keypunched and verified data directly onto magnetic tape;
- logged-in forms from keypunch and verified the forms count with previous figures;
- using the previously designed machine edit program, provided computer runs of keypunch and coding errors; and
- performed error resolution.

CREATION OF DATA FILES

Student Questionnaire and Record Review Form data files were created from the data received. The file was structured to allow for linkage between the Record Review Forms and Student Questionnaires and for linking both of these forms to institutional characteristics data and, where appropriate, to the baseline study student record. The file structure and data system were the same as those used in the baseline effort.

In order to create the analytic data file, the following steps were undertaken:

- loaded processed data tape onto disk;
- loaded clean data file onto disk following error resolution;
- constructed statistical packages control card files;
- created analytical working files;
- merged data files from various respondent sets;
- aggregated and/or disaggregated data to appropriate analytical levels; and
- generated hard copy tables for use by analysts.

END NOTES

1/ In May 1980 the United States Office of Education (USOE) was reconstituted as the U.S. Education Department (ED). In order to avoid confusion, and to remain consistent with documents previously produced under this contract, all appropiate passages in this report will refer to USOE.

2/ For a more detailed discussion, see Applied Management Sciences, Technical Report No. 1: Sample Design, Survey Yield and Bias, 1979.

3/ Cook, T.D., and Campbell, D.T. Quasi-Experimental Design and Analysis Issues for Field Settings. Chicago: Rand McNally College Publishing Company, 1979, p. 120.

3

THE IMPACT OF THE MISAA PROGRAM

INTRODUCTION

As discussed in Chapter 2, our analysis of the impact of the MISAA program is a multi-faceted approach, focusing on the pre- and post-MISAA distribution of Federal financial aid to a group of students at four-year colleges and universities from three separate viewpoints. First, students at a given class level prior to the enactment of MISAA were compared to students at the same class level after MISAA was enacted to enable the examination of the impact of the program on students at a similar stage in the educational cycle. Next, in order to describe the impact of the MISAA program on the individual student, we conducted an analysis of financial aid received by each student before and after enactment. Finally, to ascertain whether the MISAA program achieved its stated goal of increasing the aid available to middle-income students without reducing the support of students from poor families, we investigated the macro-level relationship between aid and income in each year.

The results of each of these three approaches are discussed in relationship to a set of specific study questions and research hypotheses and are presented below.

COHORT LEVEL ANALYSIS

The first component of our analysis was to examine the impact of MISAA by comparing students at each class level (cohort) prior to and after the enactment of MISAA. Cohorts, as used in experimental

terminology, refer to "groups of respondents who follow each other through formal institutions or informal institutions like the family."[1/] Thus, cohorts can be viewed as siblings within a family or, as in our case, cycles of students attending particular schools. Since we are examining contiguous cohorts within the same institutions, it is safe to assume that the cohorts are basically similar and, consequently, subject to legitimate comparisons.

Due to this level of initial comparability, any difference between the pretest cohort and the posttest cohort (i.e., sophomores prior to MISAA and sophomores after MISAA) can be attributed to the introduction of the treatment (i.e., MISAA). Since the resurvey was based upon freshmen, sophomores, and juniors from the baseline survey (1978-79), the only relevant cohorts on which comparisons can be made are sophomores and juniors. No freshmen are included in our posttest sample, and no seniors in the pretest sample, since these groups could not have been surveyed in both years. The cohort analysis can be conceptualized in the paradigm illustrated in Exhibit 3.1.

EXHIBIT 3.1: PRETEST/POSTTEST COHORT 1978-79 AND 1979-80

1978-79	1979-80
Freshman	Sophomores
Sophomores	Juniors
Juniors	Seniors

Within the two cohorts, sophomores and juniors, the analysis focuses primarily upon financial aid from two perspectives. The first perspective examines the impact of MISAA by comparing the proportion of recipients across the pretest and posttest cohorts, thereby focusing the analysis upon the total distribution of financial assistance. The second perspective centers upon the dollar amount of financial assistance

awarded to the pretest and posttest cohorts. Whereas the first perspective addresses the issue of how many students are receiving financial assistance from the various Federal programs, the second approach concentrates upon how much aid is awarded.

The results of the cohort analysis are presented by the relevant research questions. Subsumed within each research question are several research hypotheses. These research hypotheses represent our specific expectations or predictions about the direction of effects which MISAA will cause, and are contained in Exhibit 3.2. The testing of the stated research hypotheses will utilize one-tailed tests of significance, whereas the testing of statistical significance on differences in outcomes that have not been specified a priori will employ two-tailed tests.

EXHIBIT 3.2: RESEARCH QUESTIONS AND STUDY HYPOTHESES

I. Are there any differences in the proportion of recipients across the Federal financial assistance programs from 1978-79 to 1979-80?

1. There will be a significant increase in the proportion of BEOG and GSL recipient cohorts.

2. Within each cohort group, there will be a significant increase in the proportion of BEOG and GSL recipients among the middle- and upper-income level students.

3. There will be a significant increase in the proportion of recipients of any form of Federal financial assistance.

II. Are there any differences in the average award across Federal financial assistance programs from 1978-79 to 1979-80?

1. There will be a significant increase in the average award across cohort groups on BEOG, SEOG, CWS, and GSL.

2. Within each cohort group, there will be a significant increase in the average awards on BEOG, SEOG, CWS, and GSL among the middle- and upper-income level students.

3. There will be a significant increase in the average total award across cohort groups.

How Many Students Receive Financial Assistance?

The overall results of the analysis of recipients in the pretest and posttest cohorts are presented in Table 3.1. An inspection of the table indicates two general trends. First, the greatest proportion of recipients corresponds to the BEOG program. In both years and across both class levels, the proportion of BEOG recipients ranged from a low of .44 to a high of .62. The lowest proportion of BEOG recipients, which occurred among juniors in the pretest cohort, is, in fact, greater than the highest proportion in any of the other programs. Secondly, there are only minor differences in the proportion of recipients between class levels in each year. For example, there is only a .01 difference in the proportion of BEOG recipients between sophomores and juniors in the pretest sample.

In terms of differences in the proportion of recipients across the cohort groups, there were only significant differences on two of the five financial aid programs. There was no significant difference in the proportion of SEOG, NDSL, and CWS recipients across the two cohort groups. In fact, the proportion of NDSL recipients actually declined (although the change was not significant). There were, however, statistically significant differences in the proportion of recipients of BEOG and GSL from the pretest to the posttest, as predicted in the research hypotheses. The gains in the proportion of BEOG recipients were highly significant ($p < .0001$). The .11 gain from the sophomore pretest to the sophomore posttest group (.45 to .56) resulted in a z value of 5.5, while the .18 gain among the juniors (.44 to .62) resulted in a z value of 8.5. The gains in the proportion of GSL recipients, while not as dramatic, were still statistically significant. The .04 gain among sophomores resulted in a z value of 2.6 ($p < .005$), and the .05 gain among juniors resulted in a z value of 3.1 ($p < .001$).

In an attempt to examine the impact of MISAA on students at various levels of income within the cohort analysis, the cohort groups were partitioned into three income levels: low, middle, and upper. Table 3.2 presents the proportion of recipients for each Federal financial aid program broken down by cohort and income level.

TABLE 3.1: PROPORTION OF RECIPIENTS IN SOPHOMORE AND JUNIOR COHORTS BEFORE MISAA (1978-79) AND AFTER MISAA (1979-80)

Class Level	BEOG		SEOG		NDSL		CWS		GSL	
	1978-79	1979-80	1978-79	1979-80	1978-79	1979-80	1978-79	1979-80	1978-79	1979-80
Sophomore	.45	.56	.17	.19	.27	.24	.29	.31	.14	.18
Junior	.44	.62	.17	.17	.27	.24	.29	.32	.15	.20

3.5

TABLE 3.2: PROPORTION OF RECIPIENTS BY FINANCIAL AID PROGRAM BROKEN DOWN BY CLASS COHORT AND STUDENT INCOME LEVEL

Class Level	Financial Aid Program									
	BEOG		SEOG		NDSL		CWS		GSL	
	1978-79	1979-80	1978-79	1979-80	1978-79	1979-80	1978-79	1979-80	1978-79	1979-80
Sophomore										
Low Income	.80	.83	.27	.29	.32	.27	.35	.37	.10	.11
Middle Income	.34	.60	.14	.22	.34	.29	.34	.35	.14	.18
Upper Income	.01	.26	.04	.05	.12	.19	.15	.25	.23	.26
Junior										
Low Income	.77	.88	.25	.28	.33	.30	.38	.38	.10	.12
Middle Income	.29	.66	.17	.16	.30	.29	.29	.37	.18	.18
Upper Income	.02	.24	.04	.04	.14	.11	.13	.21	.23	.33

The general results of this analysis reflect achievement of the major goal of Federal financial assistance: the removal of financial barriers which prevent access to postsecondary education. For both the pretest and posttest cohorts, there is a negative relationship between the student's income level and the probability of receiving a grant. For example, among the sophomore pretest group, 80 percent of the low-income students received a BEOG, while only 34 percent and one percent of the middle- and upper-income level students, respectively, received such a grant. There also seems to be a pronounced tendency to favor low-income students in the awarding of NDSL and CWS aid. The only exception to this income-aid pattern is among GSL awards, where there is a positive relationship between student income and the receipt of a loan.

The differences between the proportion of recipients within each income level across cohort groups were subjected to tests of statistical significance. For example, we tested the difference between the proportion of low-income BEOG recipients in the sophomore pretest cohort group (.80) and the proportion in the corresponding income level of the posttest cohort group (.83). For purposes of clarity, the results of these analyses are presented by financial aid program.

There were significant increases in the proportion of BEOG recipients among the middle- and upper-income levels for both class levels. While there were concomitant increases in the proportion of low-income recipients, only the gain for juniors (from .77 to .88) was statistically significant ($z = 4.4$, $p < .0001$). The most dramatic and remarkable gains occurred for the middle-income levels where the gains ranged from .26 ($z = 7.9$, $p < .0001$) to .37 ($z = 10.3$, $p < .0001$) for middle-income sophomore and junior students. The gains for upper-income sophomore and junior cohorts were .25 ($z = 5.8$, $p < .0001$) and .22 ($z = 6.5$, $p < .0001$), respectively. In summary, there were significant gains in the proportion of BEOG recipients across every income level, except for low-income sophomores. Although there was a slight increase at this level and a significant gain among low-income juniors, the most noticeable and dramatic gains were evidenced among the middle- and upper-income level students.

In terms of SEOG recipients, there were basically very minor differences across the cohort groups. The only difference which was statistically significant was the gain among middle-income sophomore students, from .14 to .22 ($z = 3.2$, $p < .001$). The overall results of SEOG recipients indicate that there was essentially no difference in the proportion of recipients from the pretest to the posttest cohort groups regardless of student income level.

Among NDSL recipients, the results indicate that there was a slight tendency toward a reduction in the proportion of recipients among the posttest cohort students. For every income group except upper-income students at the sophomore level, there was a reduction in the proportion of recipients. Although there was an increase from .12 to .19 for upper-income sophomores, the gain was not statistically significant ($z = 1.9$, $p < .07$). While none of the reductions reached statistical significance either, the consistency of the overall results seems to suggest that there was some reduction in NDSL recipients after MISAA was introduced.

In terms of CWS awards, there was a distinct tendency for the posttest cohort groups to contain a greater proportion of recipients than the pretest cohorts. The only differences which reached statistical significance, however, were among upper-income students in both class levels and middle-income students in the junior class. The gain from .29 to .37 for middle-income juniors was statistically significant at the .02 level ($z = 2.4$), while the gain of .10 and .08 for the upper-income sophomore and junior students was significant at the .01 and .03 levels, respectively. Thus, the effects of MISAA in terms of receipt of CWS from the pretest to the posttest seems to be more pronounced for middle- and upper-income students.

The proportion of students who received a GSL award across the cohort groups varied only slightly. While there was a general trend for there to be a slight increase in the proportion of recipients among the posttest cohort, only one gain was statistically significant. The gain from .23 to .33 among upper-income junior students was significant at the .01 level ($z = 2.3$).

As specified in the research hypothesis, there were significant increases in the proportion of BEOG recipients among middle- and upper-income students. However, the hypothesis was not completely confirmed in that, among GSL recipients, there was only a significant increase among upper-income juniors. The overall results indicate that MISAA has had a beneficial effect upon middle- and upper-income students in terms of the receipt of aid, while not reducing its commitment to lower-income students. Looking at low-income sophomore students across the financial aid programs suggests no significant difference in the proportion of recipients prior to and after MISAA. The only difference among low-income students was for juniors in the posttest cohort group in terms of BEOG awards.

Among middle- and upper-income students, the results provide additional evidence of the positive impact of MISAA, indicating that grants were more available to middle- and upper-income level students after the enactment of MISAA, as was assistance through work (CWS) and loans (GSL). The proportion of recipients of any form of Federal financial assistance increased significantly for both sophomore and junior cohorts, as presented in Table 3.3. The results confirmed our research hypothesis that the proportion of recipients of any form of Federal financial aid would be significantly greater after MISAA (i.e., for the posttest cohort) than before MISAA (i.e., for the pretest cohort). The gain from .68 to .72 for the sophomores was statistically significant ($z = 2.2$, $p < .02$) as was the gain from .67 to .76 for the juniors ($z = 4.7$, $p < .0001$).

TABLE 3.3: PROPORTION OF RECIPIENTS OF ANY FORM OF FEDERAL FINANCIAL ASSISTANCE

Class Level	Total Recipients 1978-79	Total Recipients 1979-80
Sophomores	.68	.72
Juniors	.67	.76

How Much Federal Financial Assistance Do Students Receive?

The results presented above centered upon the proportion of students participating in the various programs before and after the enactment of MISAA. The perspective of this section focuses upon the amount of aid awarded prior to and after MISAA was introduced. These two perspectives provide a complimentary and comprehensive framework in which MISAA can be assessed, for it enables an examination of not only how many students were influenced by MISAA, but also the degree to which they were affected by its enactment.

Table 3.4 presents the average award for each of the various aid programs across the two cohort groups. The results of this breakdown should be viewed with one caveat in mind. The average award is based upon all students within each cohort group, both recipients and nonrecipients. Thus, these results reflect the average availability of aid across all students. Later in this section, we will present the analogous results for the subset of recipients only.

Several general trends can be detected from the results presented in Table 3.4. First, the greatest amount of assistance to students was from BEOG awards. The lowest average BEOG award of $543 (for sophomores in the pretest cohort group) was substantially higher than any of the averages on the other programs. Secondly, the differences across class levels within cohort groups were much smaller than the differences within class levels across cohort groups. That is, the average amount of aid fluctuates less across class levels within the same year than for students in the same class level across separate years. For example, the average for BEOG varies by only $8 between sophomores and juniors within the pretest sample, while the average varies by $185 and $264 for sophomores and juniors, respectively, from the first year to the second year.

TABLE 3.4: AVERAGE AWARD ACROSS FINANCIAL ASSISTANCE PROGRAMS FOR SOPHOMORE AND JUNIOR COHORTS

Class Level	BEOG		SEOG		NDSL		CWS		GSL	
	1978-79	1979-80	1978-79	1979-80	1978-79	1979-80	1978-79	1979-80	1978-79	1979-80
Sophomore	543	728	123	145	253	227	266	303	245	357
Junior	551	815	130	146	262	222	290	320	279	379

Using t-tests for independent groups, the differences across each class level of the cohort groups were tested. In terms of BEOG awards, there were significant gains in the average award for both sophomores and juniors. As stated above, the average gain for sophomores was $185 ($t = 6.8$, $p < .0001$), while the average gain for juniors was $264 ($t = 9.2$, $p < .0001$). Although there were increases in the average SEOG awards across the cohort groups, neither increase was statistically significant. Likewise, none of the differences between the cohort groups were significant for NDSL and CWS. However, while there was an increase in the average award for SEOG and CWS awards in the posttest cohort, the pattern was reversed for NDSL awards. That is, there was a slight reduction in the average NDSL awards for sophomores and juniors after the introduction of MISAA. This result is consistent with the previous findings, which indicated that there were fewer NDSL recipients in the posttest cohort groups.

In terms of GSL awards, there was a significant gain for both class levels across the cohort groups. The gains of $112 and $100 for sophomores and juniors, respectively, were significant at the .01 level.

In summary, the results provided only partial support of the research hypothesis, which predicted that there would be a significant increase on every outcome. There was a significant increase on only BEOG and GSL awards. While there were gains in SEOG and CWS awards, none of the gains reached statistical significance. Contrary to our hypothesis, there was an actual decrease in the average NDSL award. As in the case of SEOG and CWS awards, these differences were not significant.

The average awards across the Federal financial aid programs were also examined in relationship to the income levels of the students. Table 3.5 contains these results. An inspection of these results enables us to examine the average award across the three income groups and thus provides a more specific analysis of the impact of MISAA.

In terms of BEOG awards, there was a statistically significant increase in the average award for each income level. All the differences were significant at the .01 level or lower. While all the gains were statistically significant, the largest gains appeared in the middle- and upper-income groups. The average award across middle-income sophomore and junior students jumped $405 and $470, respectively, while the average award increased by $254 and $229 for upper-income sophomore and junior students, respectively.

There was only one significant difference in the average SEOG award across the income levels within the cohort groups. Although each income level gained over the pretest cohort group, only the $49 gain among middle-income sophomore students was significant ($t = 2.3$, $p < .025$).

As Table 3.5 indicates, there was a trend towards a lower NDSL average award in the posttest cohort in relation to the pretest cohort. The only exception was the increase among upper-income sophomore students from $164 to $236. None of the differences, however, reached statistical significance.

In terms of CWS aid, there was a consistent trend toward greater average awards in the posttest cohort groups. Only two of the gains, however, were statistically significant. The gain of $102 among upper-income sophomore students ($t = 2.1$, $p < .025$) was significant, as was the gain of $122 among upper-income junior students ($t = 2.2$, $p < .05$).

TABLE 3.5: AVERAGE AWARD ACROSS FINANCIAL ASSISTANCE PROGRAMS FOR SOPHOMORE AND JUNIOR COHORTS BROKEN DOWN BY STUDENT INCOME LEVEL

Class Level and Student Income	BEOG		SEOG		NDSL		CWS		GSL	
	1978-79	1979-80	1978-79	1979-80	1978-79	1979-80	1978-79	1979-80	1978-79	1979-80
Sophomore										
Low	961	1,110	172	196	245	215	291	350	140	178
Middle	267	672	105	154	307	265	294	320	229	332
Upper	12	266	30	61	164	236	161	263	593	615
Junior										
Low	929	1,149	172	214	292	249	355	362	135	213
Middle	249	719	120	117	266	239	276	322	362	325
Upper	26	255	29	53	185	162	158	280	593	835

Similar to the results for SEOG and CWS, there was a rather consistent tendency for the average GSL awards to be higher for the posttest cohorts than for the pretest cohorts. The only exception was for middle-income juniors, for whom there was a small and insignificant reduction from $362 to $325. Three of the five GSL gains, however, were significant. The $103 gain of middle-income sophomore students ($t = 2.1$, $p < .025$) was significant, as were the $78 and $242 gain for low-income ($t = 2.0$, $p < .05$) and upper-income juniors ($t = 1.8$, $p < .05$).

An analysis of the results presented in Table 3.5 reveals several major conclusions. First, the BEOG program was apparently the most directly influenced program of MISAA, as reflected in the significant gains across every income group. Secondly, the effects of MISAA on the other programs, while not as dramatic in terms of the increase in awards, were positive, except for NDSL where there was a trend towards reduction. The reduction in NDSL average awards, however, can be interpreted as a positive outcome of MISAA in that it may reflect an increase in coverage of the financial needs of students by Federal grant programs (BEOG in particular), thus reducing the need for student borrowing.

As discussed previously, Tables 3.4 and 3.5 present the average awards across all students (i.e., including nonrecipients). Tables 3.6 and 3.7 present the analogous results for a subset of these students, recipients only. Table 3.6 provides a description of the average award across financial aid programs for cohort recipients. Before each program is discussed, several general results should be noted. First, since the table contains only recipients, the average awards are much greater than the corresponding average awards presented in Table 3.4. Moreover, the greatest amount of average support per recipient consisted of GSL awards, followed by BEOG awards. Furthermore, as in the other tables presented thus far, the differences across cohort groups are larger than the differences across class levels within the same year. This finding clearly suggests that MISAA, which was introduced in the time interval between the pretest and posttest, has had a substantial impact.

TABLE 3.6: AVERAGE AWARD ACROSS FINANCIAL AID PROGRAMS FOR COHORT RECIPIENTS

Class Level	BEOG		SEOG		NDSL		CWS		GSL	
	1978-79	1979-80	1978-79	1979-80	1978-79	1979-80	1978-79	1979-80	1978-79	1979-80
Sophomore	997	1,082	604	616	760	773	766	826	1,552	1,754
Junior	1,019	1,093	612	696	788	762	847	855	1,674	1,804

TABLE 3.7: AVERAGE AWARD ACROSS FINANCIAL AID PROGRAMS FOR COHORT RECIPIENTS BY INCOME LEVEL

3.14

Class Level/Student Income	BEOG		SEOG		NDSL		CWS		GSL	
	1978-79	1979-80	1978-79	1979-80	1978-79	1979-80	1978-79	1979-80	1978-79	1979-80
Sophomore										
Low	1,120	1,274	604	619	737	748	780	899	1,364	1,514
Middle	675	961	623	596	759	772	758	789	1,487	1,724
High									1,797	1,802
Junior										
Low	1,108	1,260	617	715	794	777	878	898	1,403	1,650
Middle	726	955	603	670	783	737	819	795	1,795	1,761
Upper									1,676	1,978

In terms of BEOG awards, there was a statistically significant gain for both class levels. The gains of $85 and $74 for the sophomores and juniors, respectively, represent a significant increment over the awards in the first year. The gain at the sophomore level resulted in a t value of 3.5 ($p < .0005$), while the gain at the junior level resulted in a t value of 3.0 ($p < .005$).

While there was only a negligible $14 increase in the average SEOG award for sophomores, there was a significant increase for the junior class. The $74 gain at this level resulted in a t value of 2.3, which is significant at the .025 level.

The direction of change in the average award of NDSL varied by class level. That is, there was a $13 increase among the sophomore class level but a $26 decrement among the junior class. Neither change, however, approached statistical significance.

In terms of the average CWS award to recipients, there was a rather large gain for the sophomore class level, but only a small, nonsignificant gain of $8 for the juniors. The $60 gain at the sophomore level resulted in a t value of 2.2 ($p < .025$). Thus, while there was a gain for both groups, only one gain was statistically significant.

Both the sophomore and junior class cohorts registered rather large increases in the average award of GSL. The sophomore class gained $202, from a pretest value of $1,552 to a posttest value of $1,754 ($t = 2.7$, $p < .005$), whereas the average junior class award increased from $1,674 to $1,804 ($t = 1.7$, $p < .05$).

In summary, the results of these analyses are consistent with the earlier analyses presented in this section. Firstly, the most obvious and dramatic increases were in the allocation of BEOG and GSL support. Secondly, the results tend to suggest that MISAA also has had a beneficial effect upon the allocation of assistance from SEOG and CWS. For both programs, the average award tended to be higher in the second year than in the first year. In terms of NDSL awards, there seems to have been a negligible impact as the average NDSL award did not vary significantly for either sophomores or juniors.

Table 3.7 presents the average recipient award across each financial aid program for the cohort groups broken down by income level. As in the previous analyses, a breakdown by student income level allows us to identify the specific effects of MISAA for the various levels of income. The table does not permit, however, a very detailed assessment for the upper-income level, since there were too few cases at this level to analyze for any program except GSL.

In terms of the average BEOG award, there were substantial increases for both low- and middle-income groups across both class levels. The most dramatic increase, however, was among the middle-income groups. The middle-income sophomore cohort group increased $286, from $675 to $961 ($t = 7.9$, $p < .0005$), while the average award received by middle-income juniors increased by $229, from $726 to $955 ($t = 5.6$, $p < .0005$). Although the increase among low-income students was statistically significant (sophomores: $t = 5.5$, $p < .0005$; juniors: $t = 5.5$, $p < .0005$), the gains were not quite as dramatic as the gains for the middle-income students. For example, the increases for low-income sophomores and juniors were $154 and $152, respectively, whereas the corresponding gains among the middle-income students were $286 and $229, respectively.

The differences in the average SEOG awards were relatively small and, for the most part, nonsignificant. The only significant difference occurred among the low-income junior recipients, who gained $98, from $617 at the pretest level to $715 at the posttest level ($t = 2.15$, $p < .05$).

In terms of the average NDSL award, there was very little fluctuation between the pretest and posttest awards. There was some tendency for the posttest cohort awards to be slightly greater than the pretest cohort awards for the sophomores, but there was a trend in the opposite direction for the juniors. None of the changes, however, approached statistical significance.

The average CWS award remained essentially stable from the pretest to the posttest cohort value for all groups except the low-income sophomores. At this level, there was a $119 increment, from the pretest cohort average of $780 to the posttest cohort average of $899 ($t = 2.9$, $p < .01$). The largest difference among the remaining three comparisons was only $31 (for middle-income sophomores).

In terms of the average GSL awards, there were rather substantial gains for every group except upper-income sophomores ($5 gain) and middle-income juniors ($34 decrement). While there were substantial gains for the remaining four groups, only two reached statistical significance. Middle-income sophomores and upper-income juniors registered increases of $237 ($t = 1.94$, $p < .05$) and $302 ($t = 2.15$, $p < .025$), respectively. The $150 increase for low-income sophomores and the $247 increase for low-income juniors, while quite large, failed to reach statistical significance.

The overall results at this level reinforce and substantiate the previous findings in this section. As in the previous analyses, the impact of MISAA is most discernible in the awarding of BEOGs. There was a significant increase in the average BEOG award for every group in the posttest cohorts. The second program which was most influenced by MISAA was the awarding of GSL. There was a general trend for the average GSL awards to be substantially higher for the posttest groups than the pretest groups. While there seems to have been a positive impact upon SEOG and CWS awards, the gains were not quite as large and visible. Finally, MISAA seems to have exerted little influence in the amount of NDSL awards. There was essentially no change in this program.

The final analysis focuses upon the average total awards across all five of the Federal financial aid programs. Research hypothesis II.3 in Exhibit 3.2 predicted that there would be a significant increase in the average award after MISAA was introduced. Table 3.8 presents the results of this issue.

TABLE 3.8: AVERAGE TOTAL AWARD IN SOPHOMORE AND JUNIOR COHORTS BEFORE AND AFTER MISAA WAS INTRODUCED

Class Level	Total Award	
	1978-79	1979-80
Sophomore	1416	1760
Junior	1504	1882

The results indicate that there were fairly substantial gains from the year prior to MISAA to the year after it was introduced. The sophomore and junior class levels gained $344 and $378, respectively. The average gain across all students was statistically significant for both the sophomore and junior cohort groups. The gain for the sophomores resulted in a t value of 6.4 ($p < .0005$), while the gain for juniors resulted in a t value of 6.5 ($p < .0005$).

The results of the cohort analysis provided overwhelming support of the beneficial impact of MISAA upon all students in general and middle-income students in particular. Not only did MISAA significantly increase the proportion of financial aid recipients, but also the awards allocated to the students. Thus, it seems that more students were brought under the umbrella of Federal financial aid and to a greater extent than in the prior year.

In general, the results of the cohort analysis confirmed the research hypotheses which were specified. Even where the hypotheses were not completely confirmed, the direction and magnitude of effects supported the beneficial and positive impact of MISAA. A summary of the findings by research question and hypothesis number is presented in Exhibit 3.3. As the findings demonstrate, MISAA has exerted a positive influence upon the distribution and receipt of financial aid. The results indicate that MISAA has significantly broadened the base of financial aid recipients without undermining its commitment to low-income students. Indeed, the results demonstrate that there were also significant gains among the low-income students in terms of the distribution and allocation of financial aid.

EXHIBIT 3.3: SUMMARY OF FINDINGS, COHORT ANALYSIS

I.1:	There were significant increases in the proportion of BEOG and GSL recipients after MISAA was enacted.
I.2:	There were significant increases in the proportion of middle- and upper-income BEOG recipients as specified. In addition, there were significant gains for the following groups and outcomes: low-income BEOG recipients in the senior class; middle-income SEOG recipients in the sophomore class; middle- and upper-income CWS recipients in the junior class; upper-income CWS recipients in the sophomore class; and, finally, upper-income GSL recipients in the junior class.
I.3:	There were significant increases in the proportion of recipients of any type of Federal financial assistance for both the sophomore and junior class levels.
II.1:	There were significant increases in the average BEOG and GSL awards across all students at both the sophomore and junior class levels. In terms of recipients only, there were significant gains across both class levels for BEOG and GSL awards. There were also significant increases in the average recipient SEOG award among juniors and average recipient CWS award among sophomores.
II.2:	There were significant increases in the average BEOG award across all three income levels for both sophomores and juniors. There was a significant increase in the average SEOG award among middle-income sophomores, just as there were significant CWS gains for upper-income sophomore and juniors. There were also significant increases in the average GSL award for the following three groups: middle-income sophomores, and low- and upper-income juniors. In terms of recipients only, there were significant gains for low- and middle-income BEOG recipients for both class levels. There were also significant gains for the following outcomes and groups: low-income SEOG recipients in the junior class; low-income CWS recipients in the sophomore class; middle-income GSL recipients in the sophomore class; and upper-income GSL recipients in the junior class.
II.3:	There were significant increases in the average total award for both sophomores and juniors.

LONGITUDINAL ANALYSIS

At this level of analysis, the impact of MISAA was examined by comparing the same students prior to and after the enactment of MISAA. Measurements of the same individuals were repeated over a two year period. Since MISAA was introduced between the two data collect efforts, differences among the students across the two points in time can be attributed to its enactment.

Unlike the other two levels of analysis (macro and cohort), each student serves as his/her own control in the longitudinal analysis. That is, each person's status on any outcome measured at the second point in time (1979-80) is compared directly to his/her status measured at the first point in time (1978-79).

This level of analysis should not be mistakenly interpreted as indicating that the effects of MISAA are being analyzed over a long time period. The term "longitudinal," in this sense, implies that the same subjects were measured at two points in time, as opposed to a "cross-sectional" design in which different individuals are measured.

The major research questions and their corresponding hypotheses are stated in Exhibit 3.4, and a detailed analysis of each question and hypothesis appears below. The results of this level of analysis are presented in two sections corresponding to the two major questions: the effect on distribution and the effect on average award.

Do More People Become Recipients of Financial Aid After MISAA Than Before Its Introduction?

Table 3.9 presents a crosstabulated summary of the percentage of students who are recipients and nonrecipients over both years. An inspection of this table permits one to examine the change in recipient status over the time interval as well as the direction of change. Several consistent trends across all five financial aid programs can be detected. First, for most students, there was no change in recipient status. That is, nonrecipients in the baseline tend to remain nonrecipients in the resurvey, just as recipients tend to remain

EXHIBIT 3.4: RESEARCH QUESTIONS AND HYPOTHESES

I. Do more people become recipients of the various financial aid programs after the introduction of MISAA than before its introduction?

   1. There will be a significant increase in the percentage of BEOG and GSL recipients.
   2. Across the three income levels, there will be a significant increase in the percentage of middle- and upper-income BEOG and GSL recipients.
   3. There will be a significant increase in the percentage of recipients of any form of financial aid after the introduction of MISAA.

II. Are there any differences in the average award gains across the various financial aid programs?

   1. There will be a significant gain in the average award across the same recipients on BEOG, SEOG, CWS, and GSL.
   2. Across the three income levels, the gains on BEOG and GSL among middle- and upper-income students will be significantly greater than the gains among lower-income students.
   3. There will be a significant increase in the average total award from the year prior to MISAA to the year after its introduction.

recipients. For example, the status of 85.9 percent of the surveyed students did not change in terms of SEOG awards (i.e., 74.9 percent were nonrecipients in both years, and 11.0 percent were recipients in both years). Secondly, for every program except BEOG, there was a greater percentage of nonrecipients than recipients.

Although the status of most students remained the same and the majority were not recipients, there were significant differences in the percentages of recipients over the pre-post time interval for BEOG, NDSL, and GSL awards. Utilizing t-tests for correlated proportions, the effect on each program was assessed. In terms of BEOG receipt, there was a statistically significant gain in the percentage of recipients, from 44.5 percent in the first year to a total of 57.7 percent in the second year

TABLE 3.9: PERCENTAGE OF RECIPIENTS BEFORE AND AFTER MISAA ACROSS THE VARIOUS FINANCIAL AID PROGRAMS

	Post-MISAA (1979-80)								
	BEOG			SEOG			NDSL		
Pre-MISAA (1978-79)	Nonrecipients	Recipients	Total	Nonrecipients	Recipients	Total	Nonrecipients	Recipients	Tota
Nonrecipients	36.1	19.4	55.5	74.9	6.8	81.7	63.4	8.2	71.
Recipients	6.2	38.3	44.5	7.3	11.0	18.3	12.0	16.3	28.
Total	42.3	47.7	100.0	82.2	17.8	100.0	75.4	24.6	100.

	CWS			GSL		
Pre-MISAA (1978-79)	Nonrecipients	Recipients	Total	Nonrecipients	Recipients	Total
Nonrecipients	59.2	12.5	71.7	76.3	9.3	85.6
Recipients	10.4	17.9	28.3	5.2	9.1	14.4
Total	69.6	30.4	100.0	81.6	18.4	100.0

(z=16.5, p<.0005); among GSL recipients, there was also a statistically significant gain, from 14.4 percent to 18.4 percent (z=6.6, p < .0005). In terms of NDSL receipt, on the other hand, the difference was a decrease in awards. The percentage of NDSL recipients declined significantly, from 28.3 percent to 24.6 percent (z=5.1, p < .001). In terms of SEOG and CWS awards, the changes were not statistically significant.

The results presented in Table 3.9 confirm the first research hypothesis in that there were statistically significant gains in the percentage of BEOG and GSL recipients. There was also a significant decrease, which was not predicted, in the percentage of NDSL recipients in the second year. The results indicate that MISAA had a positive impact in increasing the percentage of BEOG and GSL recipients while maintaining the level of SEOG and CWS awards. In terms of NDSL, however, the results suggest that MISAA has had a negative impact in terms of the percentage of NDSL recipients.

Table 3.10 presents the same crosstabulated summary as Table 3.9 but is broken down by student income level. In terms of BEOG awards, there were increases in the percentage of recipients for all three income levels although the gains were far greater for middle- and upper-income students. While the gain for low-income students was only 3.1 percentage points, the gain for middle- and upper-income students was 27.8 and 16.6 percentage points, respectively. The gain for low-income students resulted in a z value of 2.54 (p < .02), while the gain for middle- and upper-income students resulted in a z value of 14.0 (p < .0005) and 8.3 (p < .0005).

There was very little variation in the percentage of SEOG recipients from the baseline to the resurvey across each income level. The largest change was among middle-income students, 18.1 percent of whom were recipients in the first year, while 18.9 percent were recipients in the second year.

TABLE 3.10: PERCENTAGE OF RECIPIENTS AND NONRECIPIENTS ACROSS BOTH YEARS ACROSS INCOME LEVELS AND FINANCIAL AID PROGRAMS

	Post-HISAA (1979-80)								
	BEOG			SEOG			NDSL		
Pre-HISAA (1978-79)	Nonrecipients	Recipients	Total	Nonrecipients	Recipients	Total	Nonrecipients	Recipients	Total
Low Income									
Nonrecipients	7.8	10.3	18.2	61.8	10.3	72.1	56.6	10.8	67.5
Recipients	7.3	74.6	81.8	10.6	17.4	27.9	13.2	19.4	32.5
Total	15.1	84.9	100.0	72.3	27.7	100.0	69.8	30.2	100.0
Middle Income									
Nonrecipients	34.8	31.5	66.3	76.1	5.0	81.1	57.7	6.8	64.5
Recipients	3.7	30.0	33.7	5.8	13.1	18.9	14.0	21.6	35.5
Total	38.5	61.5	100.0	81.9	18.1	100.0	71.6	28.4	100.0
Upper Income									
Nonrecipients	81.8	16.8	98.6	93.4	1.4	94.8	81.5	4.3	85.8
Recipients	.2	1.2	1.4	1.9	3.3	5.2	3.8	10.4	14.2
Total	82.0	18.0	100.0	95.3	4.7	100.0	85.3	14.7	100.0

	Post-HISAA (1979-80)					
	CWS			GSL		
Pre-HISAA (1978-79)	Nonrecipients	Recipients	Total	Nonrecipients	Recipients	Total
Low Income						
Nonrecipients	49.2	13.7	62.9	85.2	6.2	91.4
Recipients	13.7	23.4	37.1	4.0	4.5	8.6
Total	62.9	37.1	100.0	89.3	10.7	100.0
Middle Income						
Nonrecipients	56.3	11.8	68.2	75.3	8.8	84.2
Recipients	9.3	22.6	31.8	5.2	19.6	15.8
Total	65.6	34.4	100.0	80.6	19.4	100.0
Upper Income						
Nonrecipients	71.5	11.9	83.4	64.0	14.7	78.7
Recipients	6.9	9.7	16.6	6.9	14.5	21.3
Total	78.4	21.6	100.0	70.9	29.1	100.0

With respect to the percentage of NDSL recipients, there was essentially no change among low- and upper-income students. However, there was a significant reduction among middle-income students. While 35.5 percent of the middle-income students were recipients in the baseline survey, the percentage of recipients in the resurvey was only 28.4 ($z=4.7$, $p < .001$).

In terms of the receipt of CWS awards, there was a distinct trend towards a greater percentage of recipients in the resurvey than in the baseline survey. While there was no change among low-income recipients, there were gains among middle- and upper-income students. Only the gain of upper-income students (from 16.6 percent to 21.6 percent), however, reached statistical significance ($z=2.4$, $p < .02$).

There was also a distinct trend towards a larger percentage of GSL recipients in the resurvey for all three income levels. While all three gains were statistically significant, the most noticeable gains were among upper- and middle-income students. The upper-income group gained 7.8 percentage points ($z=3.5$, $p < .0005$), the middle-income group gained 3.6 percentage points ($z=3.6$, $p < .0005$), and the lower-income group gained 2.1 percentage points ($z=2.2$, $p < .05$).

In summary, there were significant increases in the percentage of BEOG and GSL recipients across every income level. There was also a clear trend towards a greater percentage of CWS recipients in the resurvey over the initial baseline survey. The only other significant difference occurred among middle-income NDSL recipients. In terms of NDSL receipt, there were significantly fewer NDSL recipients after MISAA was enacted than before. Across the other two income levels, there was essentially no difference in the receipt of NDSL. As stated above, the lower percentage of NDSL recipients among middle-income students probably reflects the increased availability of Basic Grants which may have diminished their need to secure educational loans.

The third study hypothesis specified that there would be a significant increase in the percentage of recipients of any form of Federal financial aid after the enactment of MISAA. To test this hypothesis, the results in Table 3.11 were subjected to a test of difference between correlated proportions. The results of the analysis demonstrate that there was, in fact, a significant increase in the percentage of aid recipients. Before MISAA was introduced, 66.4 percent of the students were recipients of some form of assistance, whereas after MISAA 72.6 percent of the students were recipients ($z=10.3$, $p < .0005$).

TABLE 3.11: PERCENTAGE OF RECIPIENTS OF ANY FORM OF FEDERAL FINANCIAL AID ACROSS YEARS

	Post-MISAA (1979-80)		
Pre-MISAA (1978-78)	Nonrecipients	Recipients	Total
Nonrecipients	21.4	12.2	33.6
Recipients	6.1	60.4	66.4
Total	27.4	72.6	100.0

How Much More Federal Financial Assistance Did Students Receive After MISAA Was Enacted?

The second research question in this section focuses directly upon the issue of how much financial assistance was received by students before and after MISAA was introduced. In essence, the question is aimed toward determining whether the same students received more, less, or the same amount of aid after MISAA was introduced as opposed to the year prior to its enactment.

To answer this question, the average award of the same recipients across both years was compared through the use of correlated t-tests. The results of this analysis are presented in Table 3.12.

As the results demonstrate, there were significant gains in terms of the average recipient award on three outcomes, BEOG, CWS, and GSL. While there were significant gains across all three of these programs, the most

TABLE 3.12: AVERAGE AWARD FOR THE SAME RECIPIENTS ACROSS BOTH YEARS

Financial Aid Program	Pre-MISAA	Post-MISAA	Difference	T	Prob.
BEOG	1,000	1,219	219	20.30	.00
SEOG	643	655	12	.64	.52
NDSL	839	818	-21	-1.13	.26
CWS	809	853	44	2.75	.003
GSL	1,658	1,792	134	3.20	.001

dramatic increase was observed on the BEOG awards, where the average award increased by $219. There were only minor differences in the average SEOG and NDSL awards, both of which failed to reach statistical significance.

The results of this analysis lend support to the first research hypothesis which predicted significant increments on all awards except NDSL. The findings indicate that there were significant gains on three of the five programs. As in the previous analyses, the results at this level clearly demonstrate that the introduction of MISAA has had a tremendously positive impact, not only on the percentage of students affected, but on the amount of their awards.

Table 3.13 presents the average award gain of recipients across each student income level. An inspection of the table reveals that there were rather large gains for both BEOG and GSL recipients. Across the remaining three financial aid programs, the gains were not very large, and, in fact, there were some reductions for recipients of SEOG and NDSL. The specific results for each program are discussed below.

To determine if there were any differences across income levels within each program, a one-way analysis of variance was conducted on each financial aid outcome. Whenever there was a significant difference across the income levels, specific comparisons among the income levels were subjected to Scheffe's method of multiple comparisons. The financial aid programs in which the one-way analysis of variance indicated that there was at least one significant difference among the

TABLE 3.13: AVERAGE GAIN AWARD OF RECIPIENTS ACROSS FINANCIAL AID PROGRAMS AND STUDENT INCOME LEVEL

Financial Aid Program	Income Level		
	Low	Middle	Upper
BEOG 1/	190	289	81
SEOG	39	-28	22
NDSL	24	-62	-66
CWS 2/	86	4	27
GSL	209	66	124

1/BEOG:

Source of Variation	DF	Mean Square	F	Prob.	Income Level	Low	Middle	Upper
Between Groups	2	1,559,276	10.4	.00	Low			
Within Groups	1,260	150,523			Middle	*		*
TOTAL	1,262				Upper			

Note 1: * indicates statistical significance of difference between relevant groups.

2/CWS:

Source of Variation	DF	Mean Square	F	Prob.	Income Level	Low	Middle	Upper
Between Groups	2	466,385	3.0	.05	Low		*	
Within Groups	600	153,762			Middle			
TOTAL	602				Upper			

Note 1: * indicates statistical significance of difference between relevant groups.

income levels are identified in the table with footnotes. The results of the analysis of variance and multiple comparisons for these programs are presented in the corresponding footnotes.

As Table 3.13 reveals, there were significant differences across the income levels for two of the programs, BEOG and CWS. In terms of the average BEOG gain, the middle-income students' gain of $289 was significantly greater than the gain for lower- and upper-income student. In terms of the average CWS gain, the lower-income students' gain of $86 was significantly greater than the $4 gain for middle-income students. The other gains were not significantly different from each other on these two outcomes.

Although there appears to be a substantial amount of variation in the average gain across the three income levels for the remaining three programs, SEOG, NDSL, and GSL, the averages did not vary significantly from each other. That is, there were no significant differences in the average SEOG gain across income levels, even though the gains ranged from a negative $28 to $39. The reason that the difference in gains on SEOG, NDSL, and GSL did not reach statistical significance was that the variances relative to their mean were relatively large.

The results presented in Table 3.13 provide partial confirmation of research hypothesis II.2 in Exhibit 3.4 in that the average BEOG gain was significantly greater for middle-income students than for low- and upper-income students. However, the upper-income BEOG recipients did not gain significantly more than the low-income group. The only other significant difference occurred among gains in CWS, in which low-income students gained substantially more than middle-income students. In general, the findings demonstrate a clear tendency toward greater awards after MISAA than before its inception. Only on NDSL awards was there a trend towards reduction, a finding which is consistent with the results reported previously.

The results presented in Table 3.13 demonstrated effects of MISAA on average gain awards across only one variable, student income level. In an effort to ascertain the effects of MISAA across various subgroups, the gains on each program were analyzed through the use of a factorial analysis of covariance design. In particular, a 2 by 2 by 3 level factorial design with two covariates was employed for each outcome. The factors and levels of each factor, along with the covariates, are listed below. The upper-income level was not included due to the low number of cases in this group. The inclusion of this level would have resulted in extremely small cell sizes when crossed with the other variables.

Factors	Levels	Covariates
Student Income Level	1. Lower 2. Middle	1. 1979-80 Student Eligibility Index 2. Family Contribution
Sex	1. Male 2. Female	
Ethnicity	1. White 2. Black 3. Other	

By utilizing this approach, differences across the three factors can be examined while statistically controlling for differences on the two covariates. Since students vary both in terms of the actual amount of family contribution they receive and their expected family contribution (SEI), a simple analysis of variance of financial aid outcomes without considering these pre-existing differences could mask the true effects. That is, the variation in outcomes, such as the average gain in BEOG awards, fluctuates with changes in the financial resources of the student. Therefore, in order to attribute differences in financial aid outcomes to the introduction of MISAA, mediating variables such as family financial support should be controlled.

While it was not possible to experimentally control these variables, it is possible to exercise ex post statistical control through analysis of covariance procedures or hierarchical setwise regression procedures.

The choice between the two procedures is completely arbitrary since both yield the same results. Cohen and Cohen[2/] have pointed out that analysis of covariance is merely an extension of multiple regression procedures and have documented the correspondence of the two methods. Only when the assumption of homogeneity of regression lines[3/] is not satisfied does the choice of the method matter. When this assumption is not satisfied, analysis of covariance is not a valid procedure; thus, one must rely upon hierarchical setwise regression procedures and include the appropriate interaction terms. Since the assumption of homogeneity of regression lines was, in this case, statistically satisfied for each dependent variable, analysis of covariance procedures were employed.

Analysis of covariance is ideally suited to unravel the effects of MISAA for several reasons. First, it allows control for initial differences on the two covariates, SEI and family contribution. It enables the examination of the outcome variables as if all students were alike on these measures. Second, the method permits the use of continuous and categorical variables within the same analysis. Moreover, the method allows for testing for significant differences across the levels of the categorical variables (income level, sex, and ethnicity). Finally, it allows for the examination of the interactions between the independent variables. For example, it enables an examination of whether the relationship of the dependent measure with student income level is constant across sex or whether the relationship is conditional upon the value of sex.

The results of these analyses are presented only for the outcomes in which there was a significant F ratio for the overall model. The F for the overall model reached statistical significance on only one of the outcomes, gains on BEOG.

Table 3.14 contains the analysis of covariance results for the average gain in award for BEOG recipients from the baseline survey to the resurvey. The results indicate that there was a significant main effect for each of the three factors and that none of the interactions was significant.

TABLE 3.14: ANALYSIS OF COVARIANCE RESULTS ON AVERAGE GAINS IN BEOG AWARDS FOR BEOG RECIPIENTS

Source of Variation	DF	Mean Square	F	Probability
Covariates	2	157,196	1.16	.32
Family Contribution	1	212,185	1.56	.21
SEI	1	102,208	.75	.39
Main Effects	4	1,583,943	11.64	.00
Income Level	1	3,467,943	25.50	.00
Sex	1	674,563	4.96	.03
Ethnicity	2	1,095,178	8.05	.00
Two-Way Interactions	5	104,143	.76	.57
Income x Sex	1	202,609	1.49	.22
Income x Ethnicity	2	184,865	1.36	.26
Sex x Ethnicity	2	4,537	.03	.97
Three-Way Interactions	2	29,916	.22	.80
Income x Sex x Ethnicity	2	29,916	.22	.80
Explained	13	555,985	4.09	.00
Residual	1033	135,982		
Total	1046	141,201		

The mean value of each level of the main effects is presented in Table 3.15, along with the means adjusted for initial differences in the covariates. The results show that the gain in BEOG award for middle-income students ($281) was significately greater than the gain for low-income students ($192). There was also a significantly greater gain in BEOG support for males ($249) than for females ($196), and a substantially larger gain for whites ($255) than for blacks and others.

TABLE 3.15: UNADJUSTED AND ADJUSTED MEANS OF AVERAGE BEOG GAINS FOR BEOG RECIPIENTS

Variable	Unadjusted	Adjusted
Income Level		
Low	192	177
Middle	281	314
Sex		
Male	294	243
Female	196	201
Ethnicity		
White	255	258
Black	179	173
Other	138	137

When the values of the dependent variable are adjusted for initial differences in the covariates, the gains for middle-income students are even more pronounced. The adjustments of the covariates on the other two factors, sex and ethnicity, made little difference. That is, there was only a small difference in the unadjusted and adjusted means for these two factors.

The overall results provide convincing support that MISAA has had a tremendously positive impact upon aid to middle-income students. Controlling for initial differences in their SEI rating and family

contribution, the average gain for middle-income students ($314) was dramatically greater than the gain ($177) for low-income students. The relatively greater gain among males and whites reflects the fact that there was a larger proportion of middle-income students in these categories in the sample.

The final analysis in this section focused upon the difference in the total amount of financial aid received by recipients in the baseline as compared to their amount in the resurvey. The results of the correlated t-test on total aid for the same recipients over the two-year interval are presented in Table 3.16. As the results indicate, there was a statistically significant increment in the total amount of aid received, from $1,790 in the first year to $2,104 in the second year.

TABLE 3.16: TOTAL AMOUNT OF FINANCIAL AID RECEIVED (ALL PROGAMS) PRIOR TO AND AFTER THE INTRODUCTION OF MISAA

Pre-MISAA	Post-MISAA	Difference	T	Probability
1,790	2,104	314	13.59	.00

As in the cohort analysis, the results at this level of analysis provide convincing evidence of the positive impact of MISAA. When the same students were compared before and after its enactment, the findings demonstrated that a greater percentage of students received financial assistance and received a greater amount of aid after MISAA was introduced. The specific findings are summarized in Exhibit 3.5, according to the appropriate research question and hypothesis.

MACRO-LEVEL ANALYSIS

The third level of analysis focuses upon an examination and comparison of aided students (middle-income) and non-aided students (low- and upper-income) at the two points in time. That is, how do the differences across student income levels in the baseline survey compare to the analogous differences in the resurvey year? For example, since

EXHIBIT 3.5: SUMMARY OF FINDINGS, LONGITUDINAL ANALYSIS

I.1	There were significant increases in the proportion of BEOG and GSL recipients after MISAA was introduced. There was also a significant difference in the reduction of NDSL recipients in the second year.
I.2	As specified, there were significant increases in the proportion of middle- and upper-income BEOG and GSL recipients. In addition, there were significant differences for the following groups and outcomes: gain of low-income BEOG recipients; reduction of middle-income NDSL recipients; gain of upper-income CWS recipients; gain of low-income GSL recipients.
I.3	There was a significant increase in the proportion of recipients of any type of Federal financial aid after MISAA was enacted.
II.1	There were significant gains in terms of the average award on three of the four predicted outcomes: BEOG, CWS, and GSL. The difference in SEOG support was not significant.
II.2	The average BEOG gain was significantly greater for middle-income students than for lower- and upper-income students. Also, lower-income CWS recipients gained significantly more than the other two income levels. None of the other levels was significantly different on any of the outcomes.
II.3	The total amount of financial aid was significantly greater for recipients after MISAA was introduced.

MISAA is aimed at reducing the differences in the amount of BEOG awards across student income levels (especially for middle-income students), the differences should be substantially smaller for students in the resurvey than for students in the baseline survey.

At this level of analysis, the effectiveness of MISAA was being gauged by comparing the differences of financial aid outcomes for the two samples of students, those in the baseline survey and those in the resurvey. As with the two previous analyses, two major research questions were addressed. The first question focused on the differences in the probability of receipt of award within each year, and the second

question examined differences in the per-capita availability of awards within each year. The research questions, along with the specific research hypotheses, are presented in Exhibit 3.6. The results are presented in two sections, corresponding to the two research questions.

Probability of Receipt of Financial Aid Within and Across Each Year

As discussed in Chapters 1 and 2, previous research has indicated that there was a "middle-income gap" in the awarding of aid to middle-income students. One would expect to find that as income increases, the amount of aid decreases, and that at some point it stops. Presumably, the curve should be continuous so that there would be no large gaps in the distribution of aid. However, as indicated previously, the relationship between student income and financial assistance was not continuous prior to MISAA.

EXHIBIT 3.6: RESEARCH QUESTIONS AND STUDY HYPOTHESES

I. Are the differences in the probability of receiving an award across the various levels of student income greater in the baseline year than in the resurvey?

   1. The differences in the probability of award across student income levels will be less variable for BEOG awards in the resurvey year over the baseline survey.
   2. There will be a significant increase in the probability of receipt of a BEOG and GSL award among middle- and upper-income students in the resurvey year over the baseline survey.
   3. There will be a significant increase in the probability of an award from any type of Federal financial aid for students in the resurvey over the baseline survey.

II. Does the per capita availability of Federal financial support change from the baseline year to the resurvey?

   1. The per-capita availability of all Federal financial aid programs, except NDSL, will be greater for students in the resurvey over students in the baseline survey.
   2. The per-capita availability of all Federal financial aid programs, except NDSL, will increase for middle- and upper-income students than for low-income students.
   3. The per-capita availability of the total amount of aid will be greater for students in the resurvey than for those in the baseline.

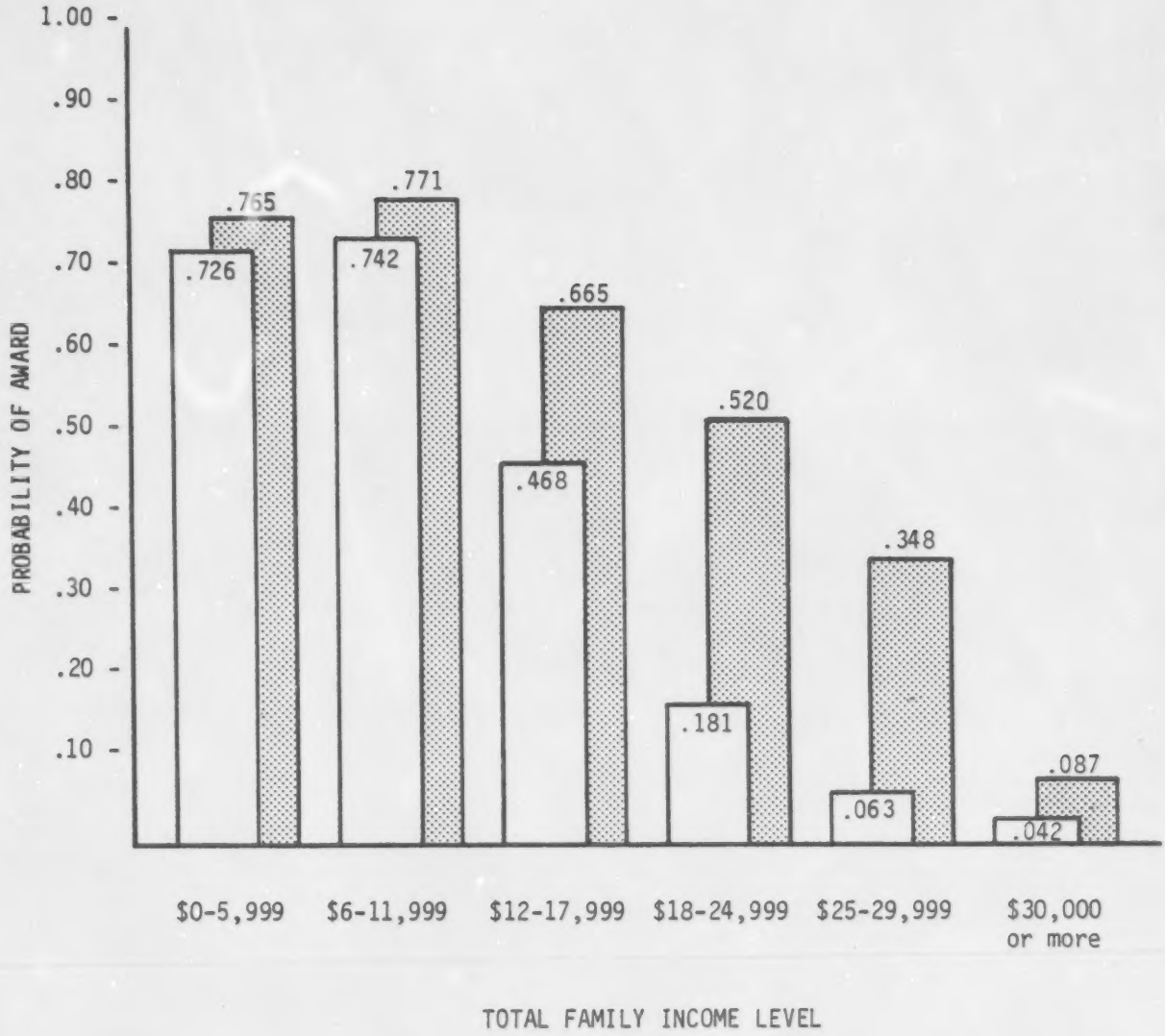
To assess the degree to which MISAA has changed the distribution of financial aid to students of different income levels, a series of hierarchical setwise regression analyses were conducted. The dependent outcome in each analysis was a simple, dichotomous variable representing the student's status with respect to receiving financial aid. The analyses were conducted for each financial aid outcome (including receipt of any aid) across both years. The independent variables, which were entered in two sets, included ethnicity and sex and student-income level. By entering income first, and then ethnicity and sex, the relationship of recipient status on student-income level could be examined, both with and without a control for differences in ethnicity and sex. Thus, this analysis permits the determination of the probability of receiving an award across the various income levels, as if all students were of the same sex and ethnicity.

There were a total of 12 regression analyses, corresponding to the 12 dependent variables (one for each type of aid for each year). The results of these analyses are presented in Figures 3.1 through 3.6. The graphs presented in the figures indicate the probability of receiving an award for each income level, while controlling for ethnicity and sex.

Figure 3.1 indicates the probability of receiving a BEOG award across student income levels for both years. Inspection of this figure reveals substantial changes in the probability of receiving a BEOG award across the two years. While the probability of receiving an award among middle-to upper-income students in the 1978-79 academic year ranged from a high of .468 to a low of .042, the corresponding range in the 1979-80 academic year was from a high of .665 to a low of .087. Not only were there substantial changes in the probability of award after MISAA, but the differences in the receipt of an award were less variable over the levels of student-income after MISAA was introduced, as predicted in the first hypothesis. For example, in the first year, the probabilities of award dropped dramatically as student income increased, whereas in the second year, the relationship between probability of award and student income was more continuous. Most noticeable is the fact that, in the

FIGURE 3.1

PROBABILITY OF BEOG AWARD PRIOR TO AND AFTER THE ENACTMENT OF MISAA BY INCOME LEVEL OF RECIPIENTS



first year, there was a .274 drop in the probability of award from students in the second income level ($6-$11,999) to students in the third income level ($12-$17,999), while the drop was only .106 for the corresponding students in the second year. In general, while there were large gaps in the allocation of BEOG awards across student income levels prior to MISAA, the allocation of BEOG revealed a more consistent step-like relationship to student income after MISAA's introduction. Although the overall relationship between receipt of aid and income level is negative for both years, as would be expected, the distribution pattern in the second year reflects an increased commitment to help defray more of the educational expenses of middle- and upper-income students.

Figure 3.2 graphically displays the probability of SEOG receipt across student income levels for both years. The figure reveals that substantially fewer individuals receive SEOG awards in relation to BEOG awards. The highest probability of receiving a SEOG award occurred among students in the lowest income level ($0-$5,999) for both years. Prior to MISAA the probability was .264, and after MISAA the probability was .250.

Figure 3.2 illustrates that there were no large gaps in the receipt of SEOG awards across student income, either prior to or after MISAA was introduced. A direct comparison of the two years also demonstrates that there was substantially no difference in the probability of award over the two years. That is, the probability of award for a certain income level tended to fluctuate minimally from year to year. For example, the probability of award among students in the fourth income level ($18-$24,999) varied only from .150 (1978-79) to .147 (1979-80).

The probabilities of receiving an NDSL award are presented in Figure 3.3. As with the receipt of SEOG awards, there was very little difference in the pattern of NDSL awards across student income levels over the two year period. In the first year, the probabilities ranged from .349 in the third income level ($12-$17,999) to .03 in the sixth income level ($30,000 or more), while in the second year the probabilities ranged from .325 in the first income level ($0-$5,999) to .058 in

FIGURE 3.2

PROBABILITY OF SEOG AWARD PRIOR TO AND AFTER THE ENACTMENT OF MISAA BY INCOME LEVEL OF RECIPIENTS

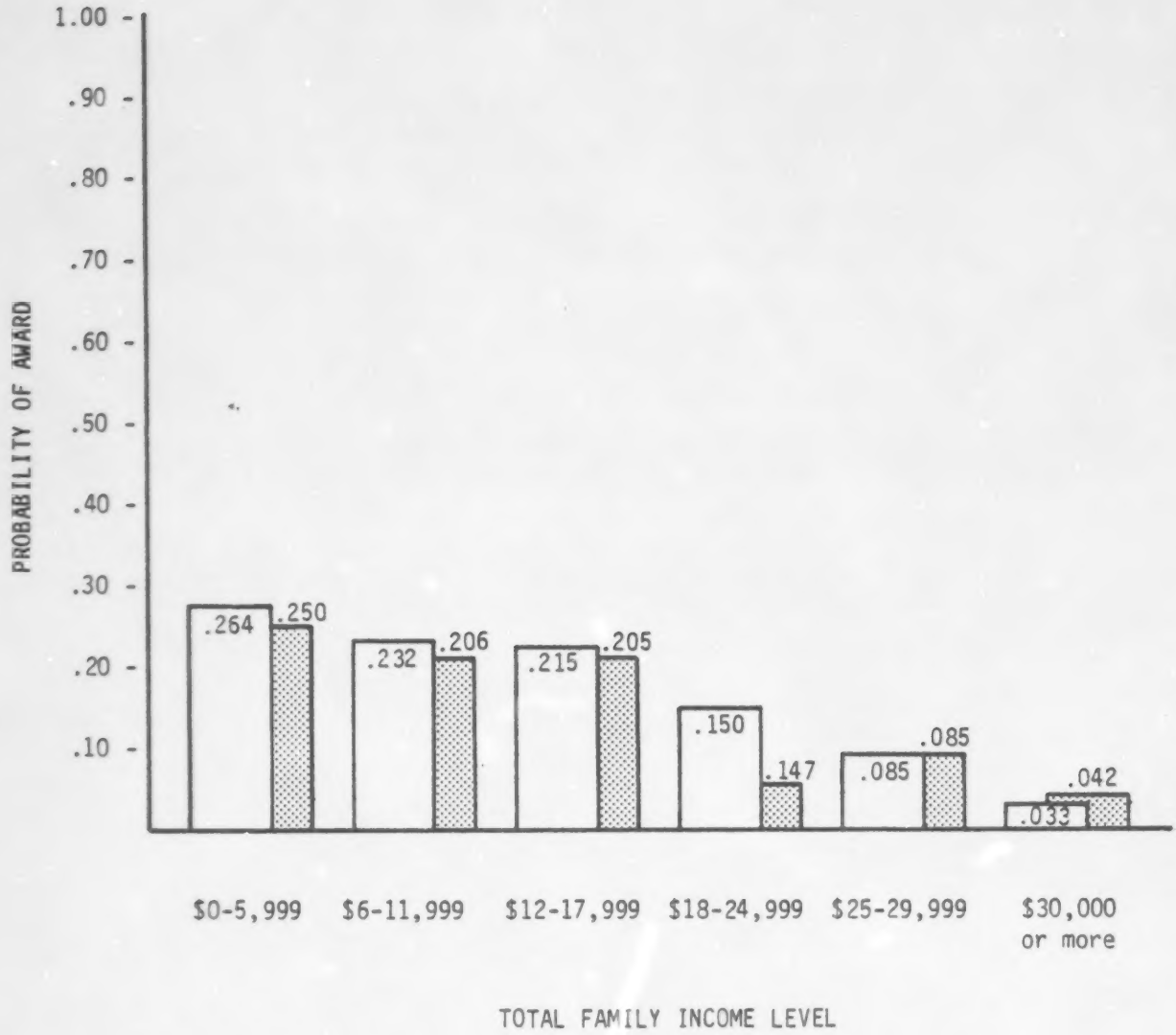
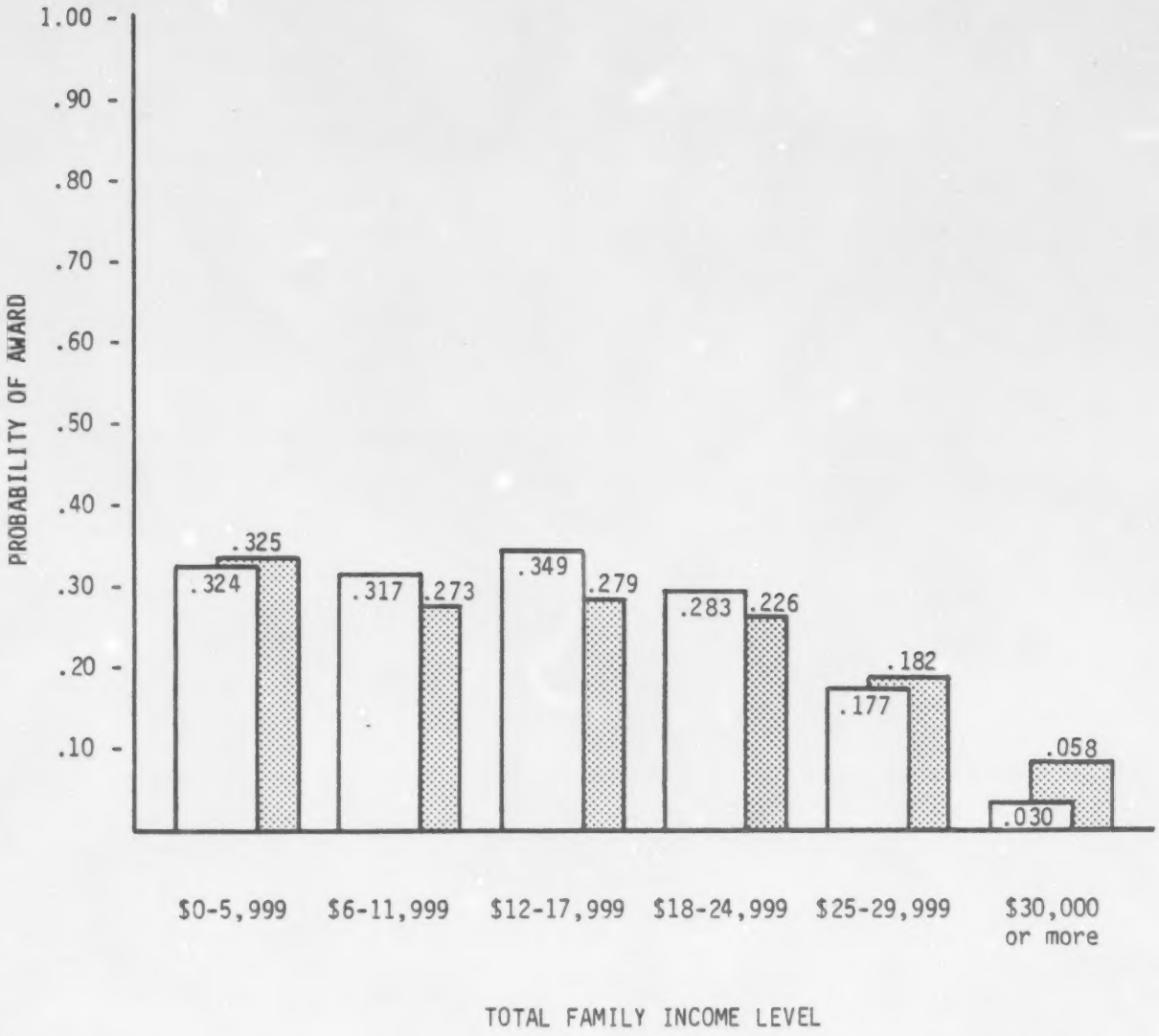


FIGURE 3.3

PROBABILITY OF NDSL AWARD PRIOR TO AND AFTER THE ENACTMENT OF MISAA BY INCOME LEVEL OF RECIPIENTS



the sixth income level ($30,000 or more). Whereas the overall relationship between NDSL receipt and student income was rather consistent across both years, there was a noticeable trend for students in the middle-income ranges to receive fewer NDSL awards after MISAA was introduced. For example, prior to MISAA, the probabilities of middle-income students ($12-$17,999 and $18-$24,999) receiving an NDSL award were .349 and .283, but after MISAA the probabilities were .279 and .226, respectively.

Figure 3.4 illustrates the probabilities of receiving a CWS award. While there was, in general, a negative relationship between the receipt of a CWS award and student income prior to MISAA, the relation- ship was flatter after MISAA. That is, there were only minor differences in the probability of a CWS award across student income (particularly the first four levels--$0-$24,999) in the second year, whereas in the first year there was a more visible tendency for the probability of an award to decrease as income increased. In addition to the change in the distributional pattern, there was a distinct tendency for students in the second year to have a greater probability of receiving an award. For every income level except the first ($0-$5,999) and third ($12-$17,999), the probability of receiving a CWS award was higher after MISAA was introduced.

Figure 3.5 presents the probabilities of receiving a GSL award. In terms of the overall pattern of distribution, there was not a noticeable difference. For both years, there was a slight positive relationship between the receipt of GSL award and student income level. Although there was no discernible change in the distributional pattern, there was a distinct trend toward a greater proportion of recipients after MISAA was introduced. For every income level, there was a greater probability of receiving a GSL award in the second year than in the first year.

Figure 3.6 provides a graphic representation of the probabilities of receiving any type of Federal financial aid. Although there was a negative relationship between receipt of any type of aid and income level, as would be expected, there were smaller differences in the probability of award across income levels after MISAA was introduced.

FIGURE 3.4

PROBABILITY OF CWS AWARD PRIOR TO AND AFTER THE ENACTMENT OF MISAA BY INCOME LEVEL OF RECIPIENTS

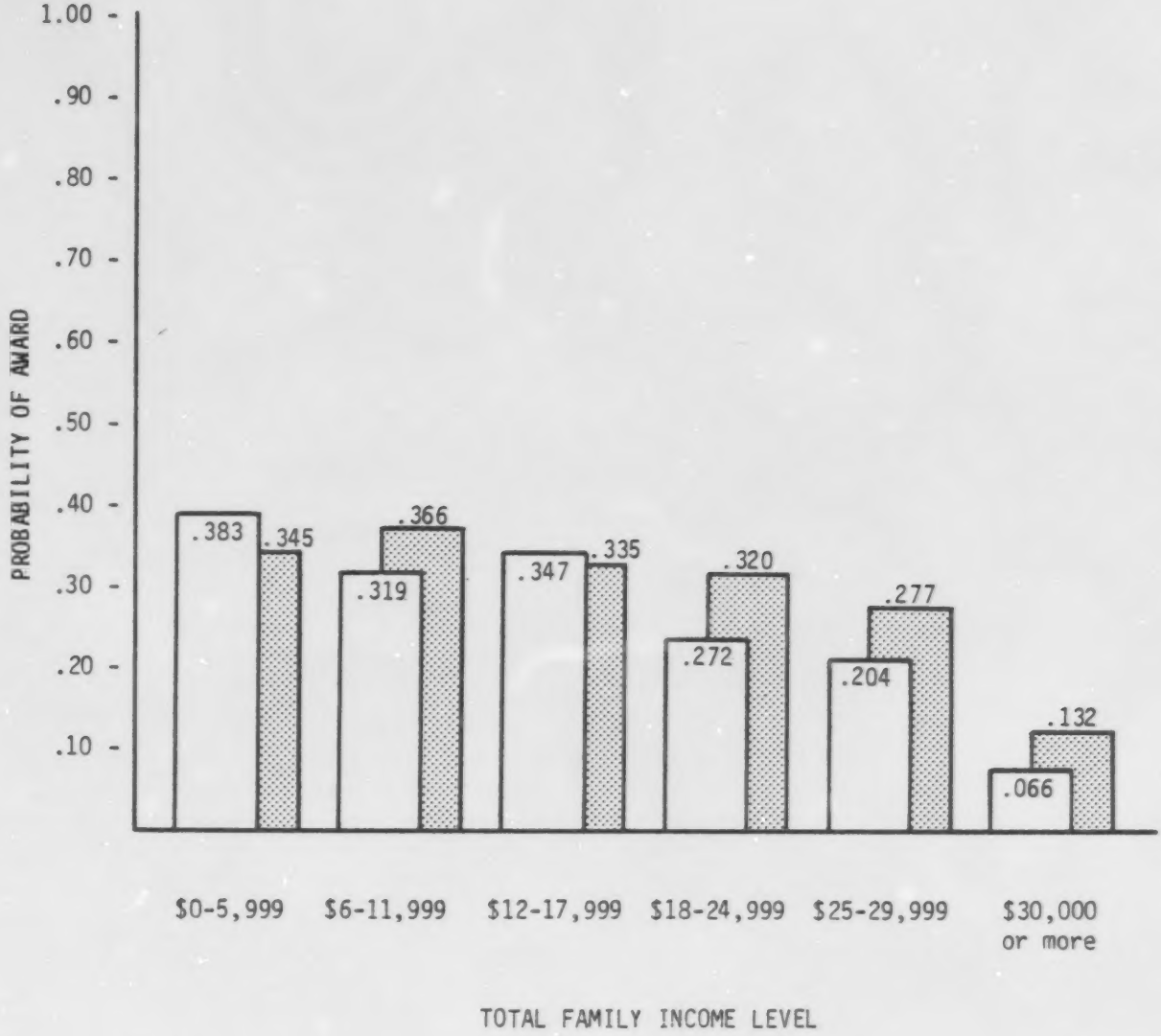


FIGURE 3.5

PROBABILITY OF GSL AWARD PRIOR TO AND AFTER THE ENACTMENT OF MISAA BY INCOME LEVEL OF RECIPIENTS

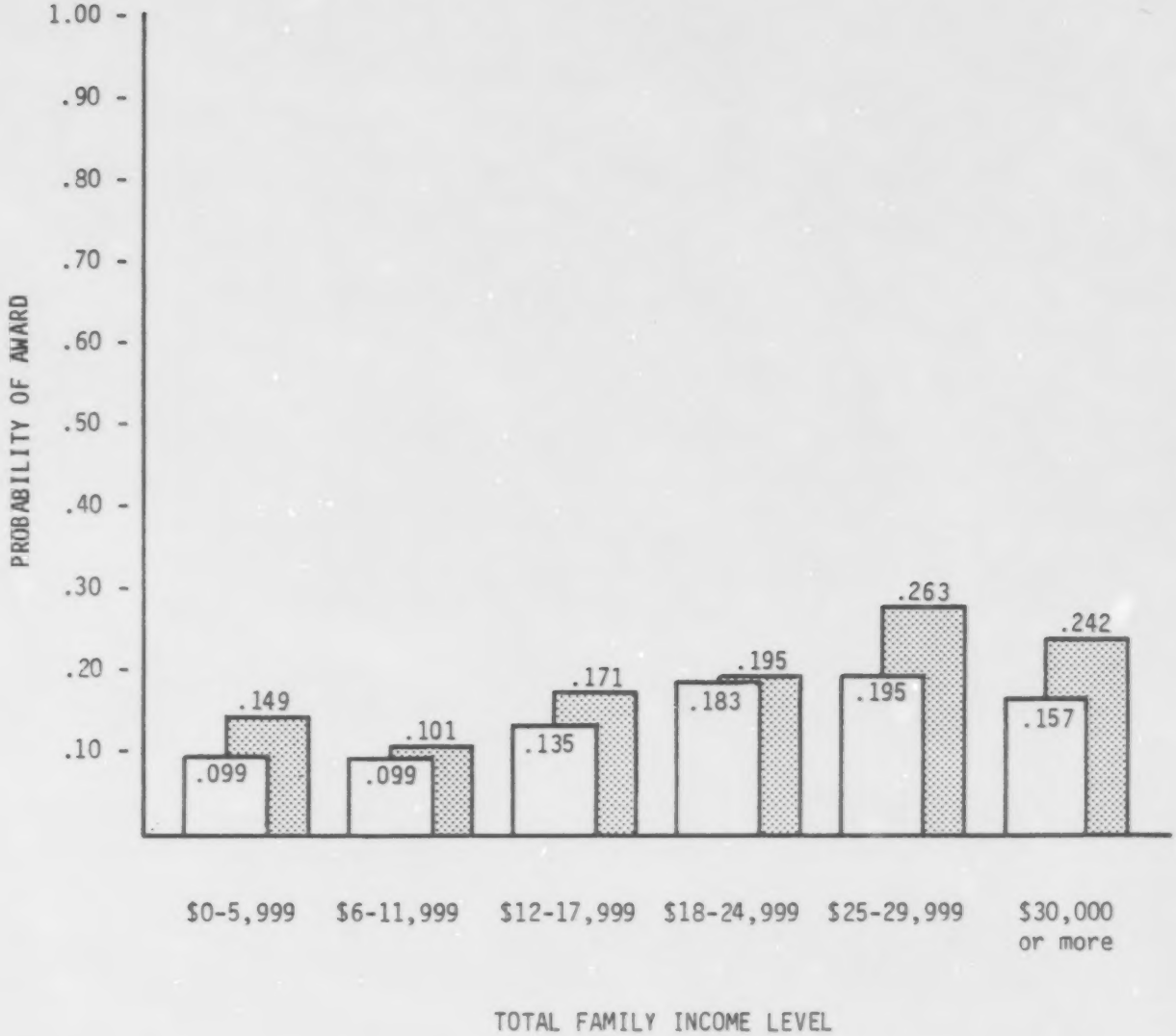
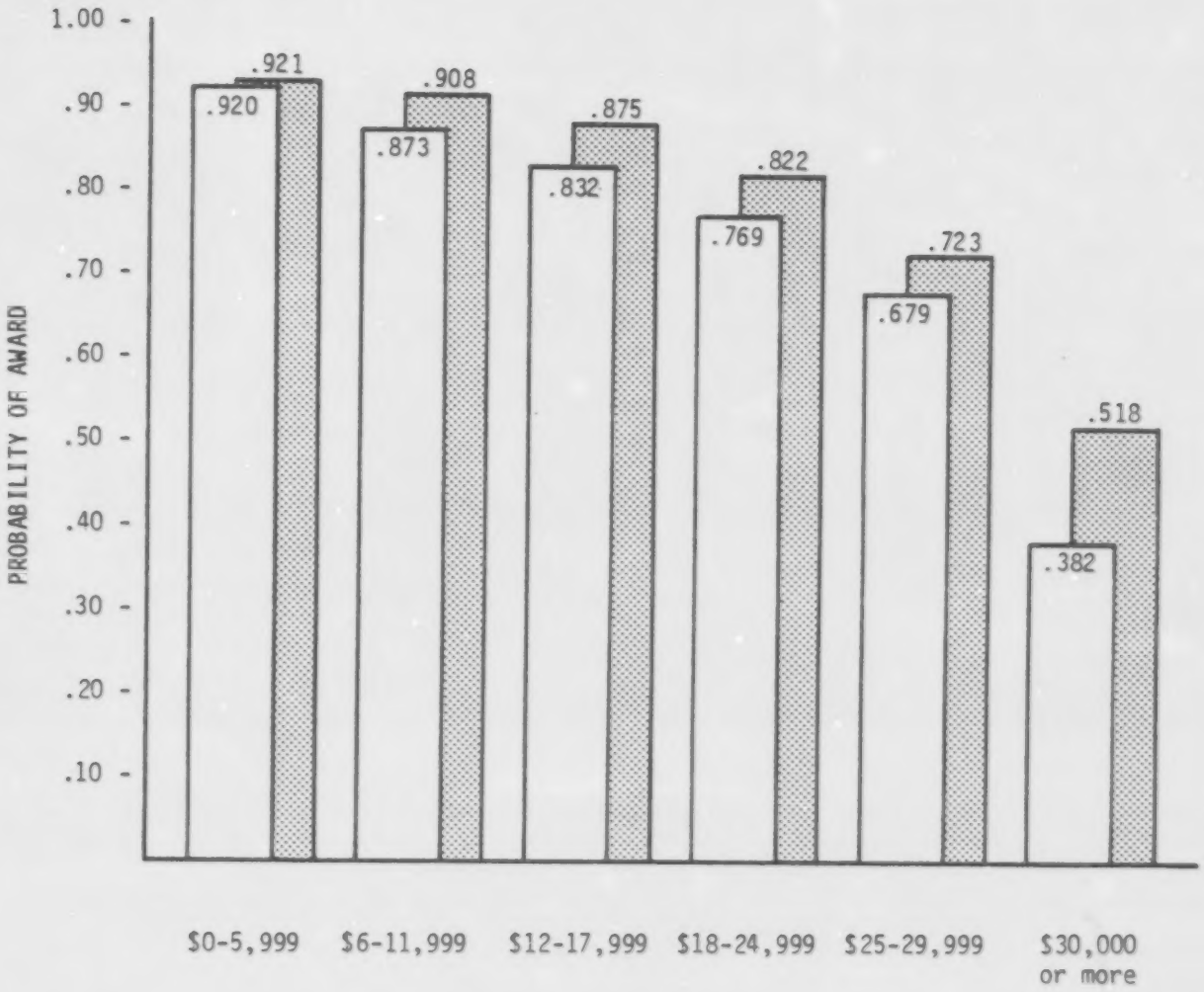


FIGURE 3.6

PROBABILITY OF ANY AWARD PRIOR TO AND AFTER THE ENACTMENT OF MISAA BY INCOME LEVEL OF RECIPIENTS



The difference between the probabilities of contiguous income levels was less in the second year than in the first year for every income level, except the fourth and fifth ($18-$24,999 and $25-$29,999), in which there was essentially no difference (.09 to .099). For example, the difference between the first and second income levels ($0-$5,999 and $6-$11,999) was .047 in the first year, but only .013 in the second year. In addition to smoothing out the relationship between receipt of aid and student income level, there was also a greater probability of award after MISAA was enacted. For every income level, there was a greater probability of award in the second year than in the first year.

To examine the second and third hypotheses, the differences across years were examined for each income level. In terms of the differences in the probability of receiving an award prior to and after MISAA, there were statistically significant differences on several outcomes. Table 3.17 presents the z values of the differences in the probability of award by each income level. The differences which were statistically significant are denoted with an asterisk.

As Table 3.17 indicates, the probabilities of receiving a BEOG award were significantly higher for middle- and upper-income level students after MISAA was introduced. Although there were gains among low-income students, the gains were not as dramatic, as evidenced by the large discrepancies in the bar graphs for middle- and upper-income students (Figure 3.1). In terms of the probability of receiving a CWS award, the changes of receipt were significantly greater for upper-income students after MISAA was introduced than in the previous year. None of the other changes reached significance. Likewise, upper-income students were more likely to receive a GSL after MISAA than in the year before its introduction. There was also a significant increase in the probability of recipients in the lowest income level ($0-$5,999). As in the previous levels of analysis, there were significant reductions in the probability of receiving an NDSL award among middle-income students in the resurvey over the initial baseline survey.

TABLE 3.17: Z VALUES OF THE DIFFERENCES IN PROBABILITIES OF AWARD FROM 1978-79 to 1979-80

Student Income Level	BEOG		SEOG		NDSL		CWS		GSL		ANY AID	
	DF	Z	DF	Z	DF	Z	DF	Z	DF	Z	DF	Z
1: 0-$5,999	1363	1.65	1360	-0.59	1357	0.04	1356	-1.45	1362	2.80*	1363	0.07
2: $6-$11,999	1080	1.11	1077	-1.03	1078	-1.58	1077	1.62	1078	0.11	1080	1.83
3: $12-$17,999	1104	6.58*	1104	-0.40	1102	-2.48*	1104	-0.42	1101	1.66	1104	2.00*
4: $18-$24,999	1173	12.16*	1173	-0.14	1174	-2.24*	1174	1.80	1174	0.52	1173	2.25*
5: $25-$29,999	745	9.48*	745	.00	744	0.17	743	2.32*	740	2.19*	745	1.31
6: $30,000 or more	490	2.01*	490	0.52	490	1.50	490	2.42*	490	2.34*	490	3.02*

Note 1: * denotes statistical significance (.05 or lower)

3.47

In terms of the likelihood of receiving any form of Federal financial aid, the results indicate that there were rather dramatic increases among middle- and upper-income level students. Although there was an increase across each income level, only the gains among middle- and upper-income students reached significance.

In summary, the results of the analysis of the first question indicated that there were substantial differences in the probability of receiving Federal financial aid from the baseline survey to the resurvey. The differences were most visible in the receipt of BEOG awards. In the baseline survey, there were large gaps in the awarding of BEOG aid to students of various income levels, whereas in the resurvey, the distribution of BEOG support was much smoother over the income levels of the students. Not only was the distribution pattern across student income levels more consistent after MISAA was introduced, but there were also significant increases in the probability of receiving an award. These increases were particularly dramatic for middle- and upper-income students.

The positive impact of MISAA in increasing the probability of award was not restricted to BEOG support; there were also increases in the probability of CWS and GSL support. The overall positive impact is reflected in the finding that the probability of receiving any form of Federal financial aid increased markedly after MISAA was enacted.

Does The Per-Capita Availability Of Federal Financial Support Change As A Result Of MISAA?

The estimation of the per capita availability of each financial aid program necessitates a two-staged approach. First, the probabilities of receiving an award from each financial aid program must be calculated. This step was satisfied in the previous section through the regression analyses which utilized recipient status as the dependent variable for each program. The probabilities were reported in Figures 3.1 through 3.6. The second step involves the calculation of the predicted average awards of recipients for each program. The results of these calculations are presented in Figures 3.7 through 3.12. As in the first step,

FIGURE 3.7

AVERAGE BEOG AWARD PRIOR TO AND AFTER THE ENACTMENT OF MISAA BY INCOME LEVEL OF RECIPIENTS

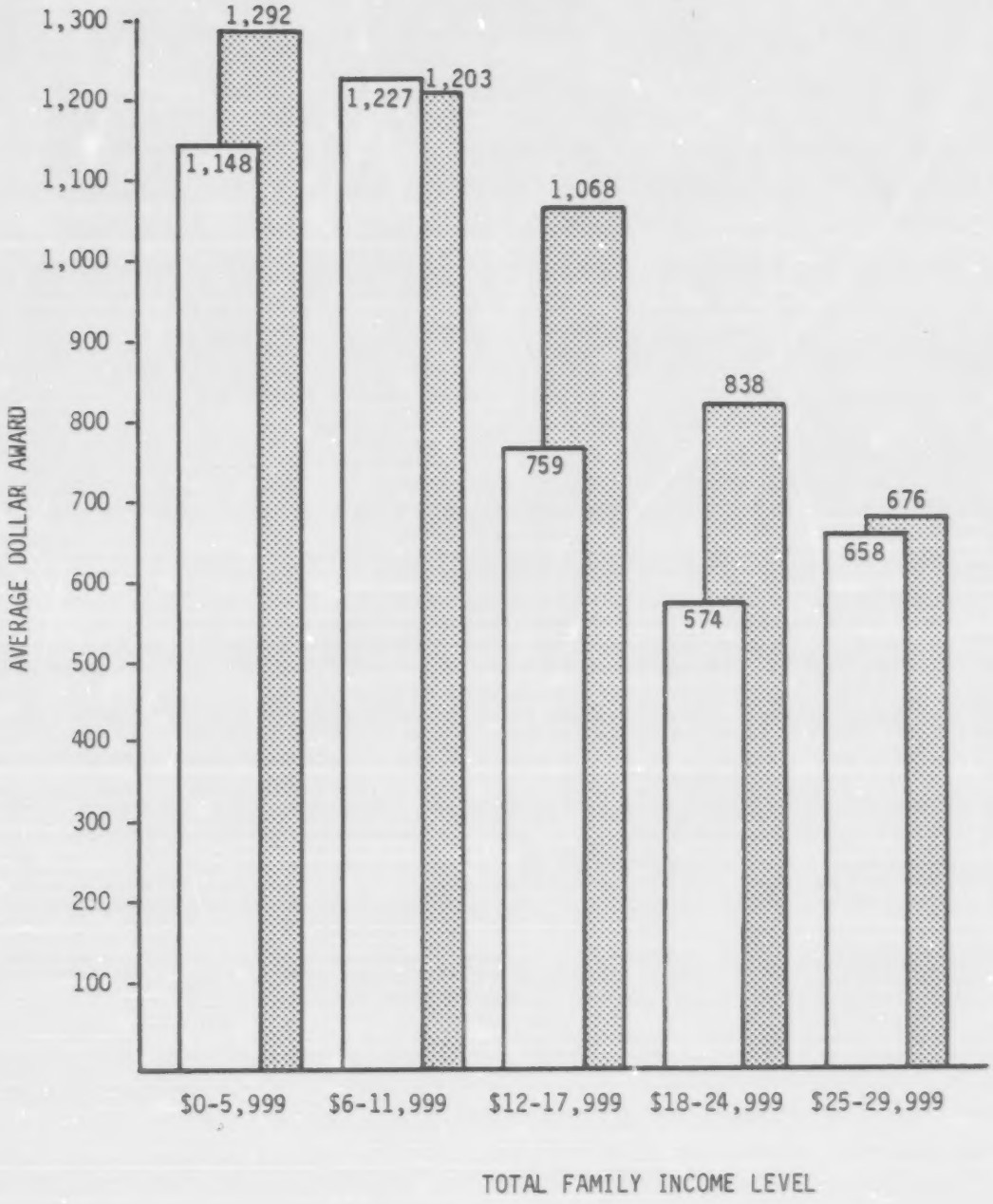


FIGURE 3.8

AVERAGE SEOG AWARD PRIOR TO AND AFTER THE ENACTMENT OF MISAA BY INCOME LEVEL OF RECIPIENTS

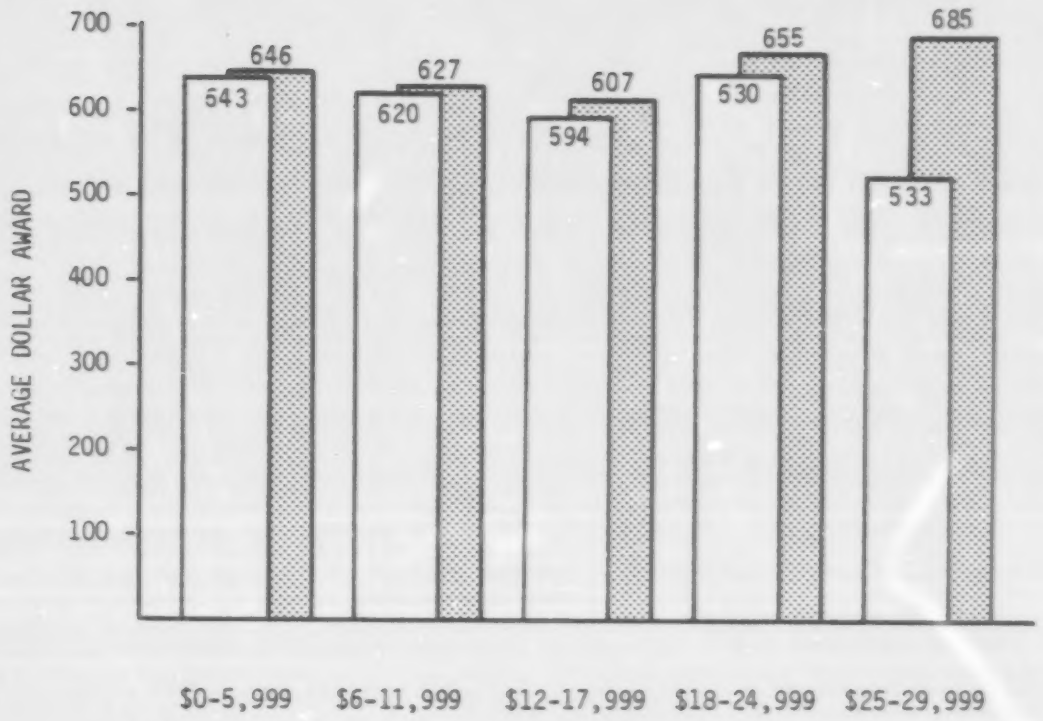


FIGURE 3.9

AVERAGE NDSL AWARD PRIOR TO AND AFTER THE ENACTMENT OF MISAA BY INCOME LEVEL OF RECIPIENTS

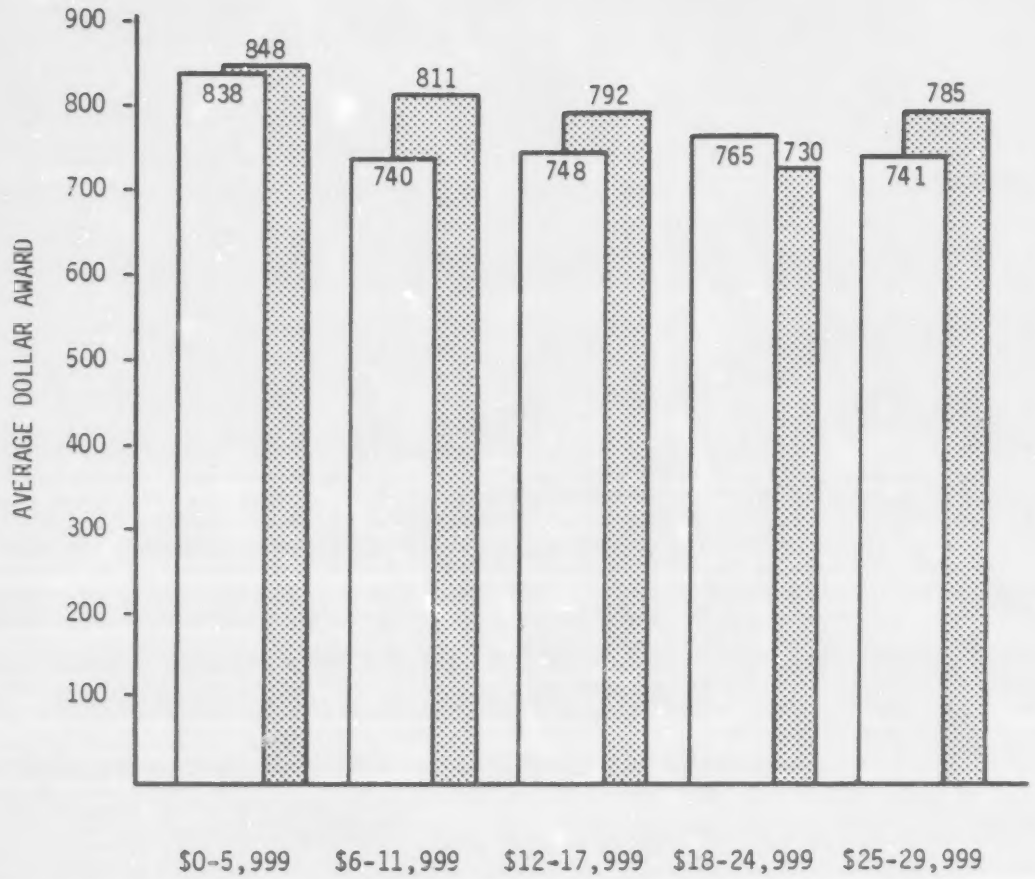


FIGURE 3.10

AVERAGE CWS AWARD PRIOR TO AND AFTER THE ENACTMENT OF MISAA BY INCOME LEVEL OF RECIPIENTS

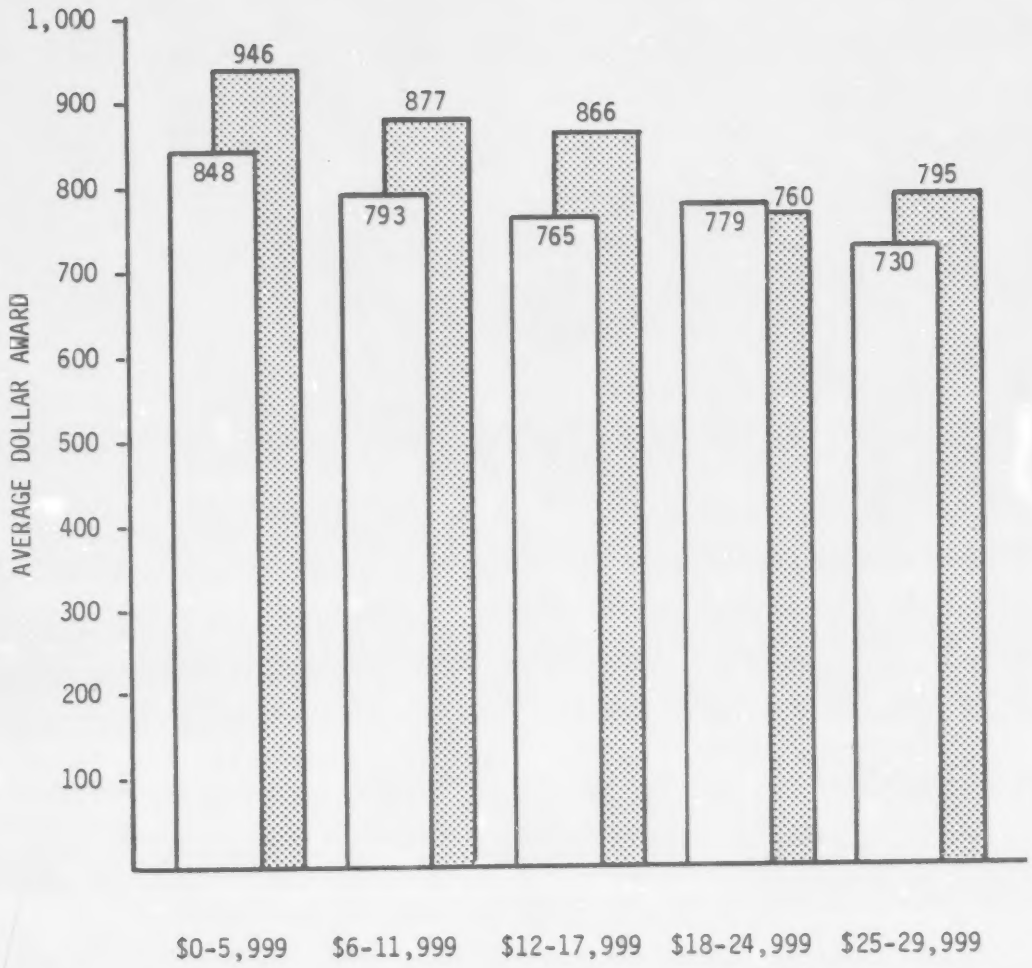


FIGURE 3.11

AVERAGE GSL AWARD PRIOR TO AND AFTER THE ENACTMENT OF MISAA BY INCOME LEVEL OF RECIPIENTS

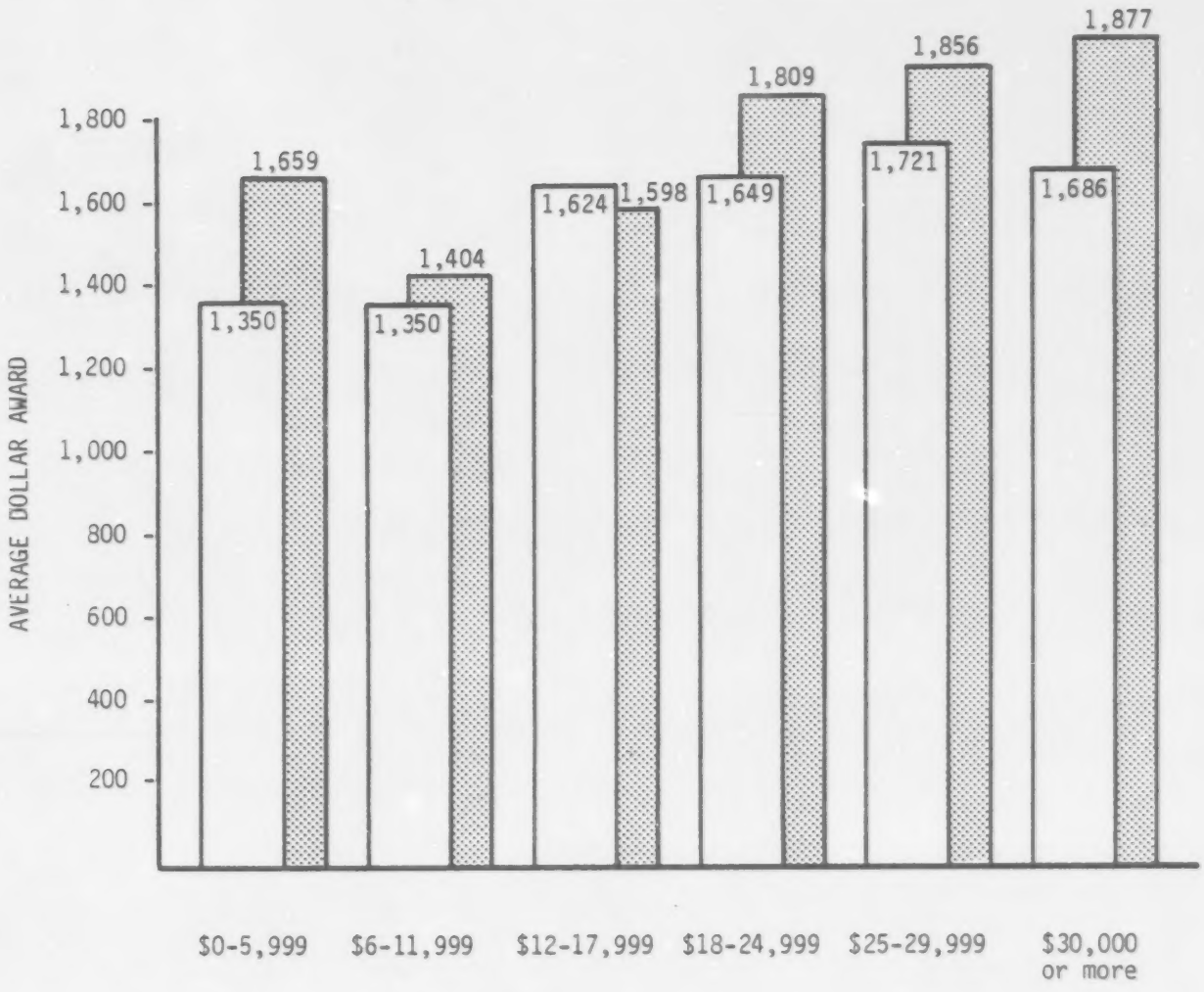
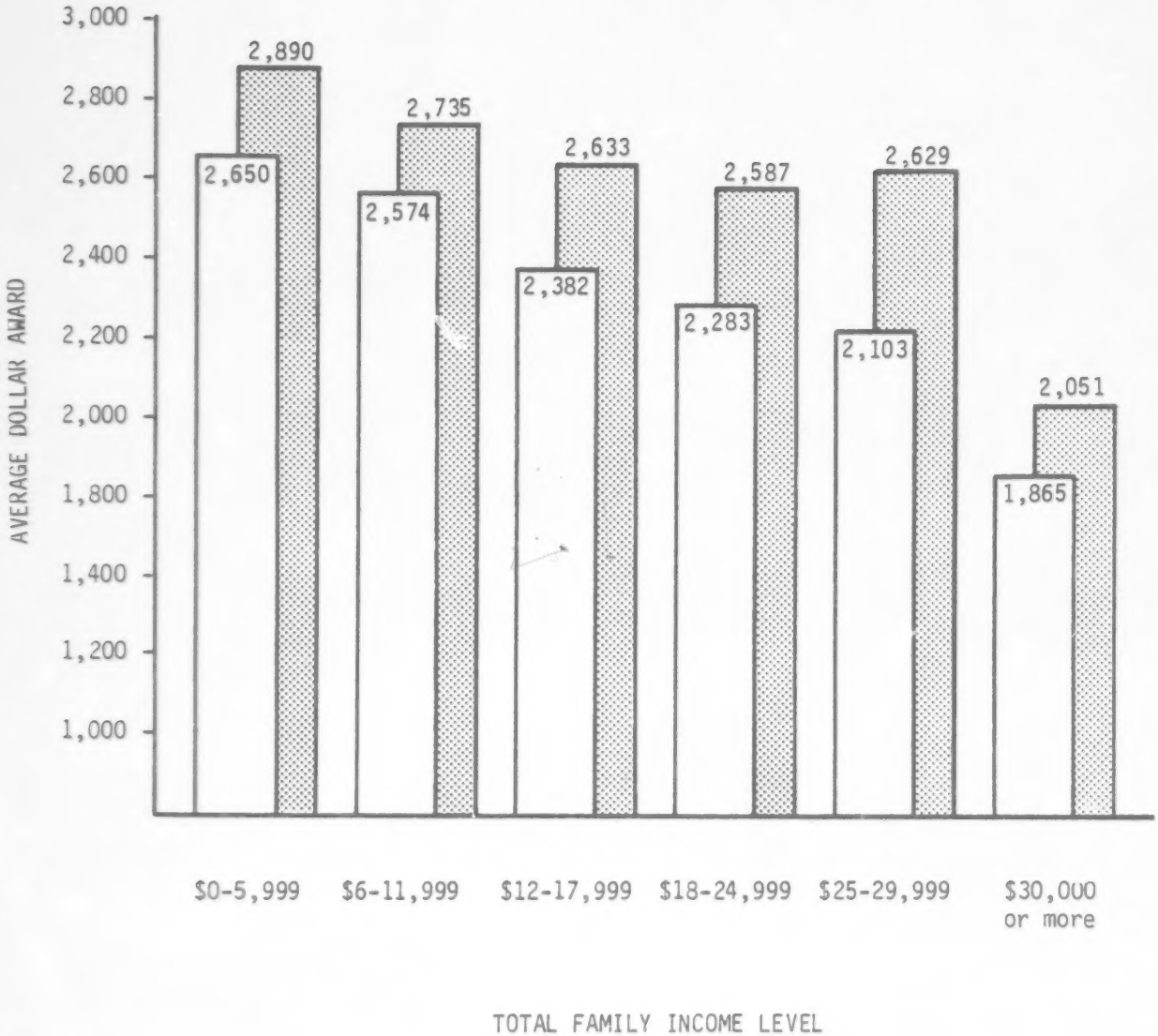


FIGURE 3.12

AVERAGE TOTAL AWARD ACROSS ALL FINANCIAL AID PROGRAMS PRIOR TO AND AFTER THE ENACTMENT OF MISAA BY INCOME LEVEL OF RECIPIENTS



hierarchical setwise regression analyses were employed to obtain the predicted average award for recipients in each program, while controlling for differences on sex and ethnicity.

An inspection of this set of figures reveals several consistent trends. First, as Figure 3.7 vividly portrays, there were extremely large gains in BEOG support among middle- and upper-income students after MISAA was introduced. Furthermore, in terms of BEOG support, there were smaller differences in the amount of aid received across the income levels in the second year than in the first year. Finally, the variation within and across years on the other financial aid programs was not as noticeable. While there were trends toward larger awards, particularly among GSL and CWS recipients and the total amount of aid, the differences were not as dramatic as they were for BEOG recipients.

To obtain the per-capita availability of Federal financial support, one merely multiplies the products of these two steps together. That is, the probability of receipt of a BEOG is multiplied with the predicted average value to yield the per-capita availability. The per-capita availability provides an index of the amount of financial support available to students in each income class.

The results of these two stages are presented in Table 3.18. The values represent the amount of financial aid which a student in a given income class can expect to receive, all other things being equal. That is, it reflects the extent of support which the Federal financial aid system provides to members of each income level, a priori of any knowledge about their application status, race, or sex. It represents the pool of Federal financial aid upon which students in each income level can expect to draw.

The three hypotheses in this section specified in general that the per-capita availability of Federal financial aid programs would be greater after MISAA was introduced than before. As the results in Table 3.18 indicate, the first hypothesis was partially confirmed in that the average per-capita availability was greater after MISAA than before its

TABLE 3.18: THE PER-CAPITA AVAILABILITY OF FEDERAL FINANCIAL ASSISTANCE BROKEN DOWN BY FINANCIAL AID PROGRAM AND STUDENT INCOME LEVEL

	Financial Aid Program					
	BEOG	SEOG	NDSL	CWS	GSL	TOTAL
$0-$5,999						
Pre-MISAA	833	170	271	325	134	2,439
Post-MISAA	988	161	276	326	247	2,662
$6-$11,999						
Pre-MISAA	910	144	235	253	134	2,247
Post-MISAA	927	130	221	321	142	2,483
$12-$17,999						
Pre-MISAA	355	128	261	265	219	1,982
Post-MISAA	710	124	221	290	273	2,304
$18-$24,999						
Pre-MISAA	104	94	216	212	302	1,756
Post-MISAA	436	96	165	243	353	2,126
$25-$29,999						
Pre-MISAA	41	45	131	149	336	1,428
Post-MISAA	235	58	154	220	488	1,901
$30,000 or more						
Pre-MISAA	*	*	*	*	265	712
Post-MISAA	-	-	-	-	454	1,062
Average						
Pre-MISAA	449	116	223	241	278	1,761
Post-MISAA	659	114	207	280	391	2,090

*Too few cases.

introduction in terms of BEOG, CWS, and GSL support. While there were gains across all three of these outcomes, the most apparent were the gains in BEOG and GSL. The average per-capita availability of BEOG expanded by $210, from $449 to $659, during the interval, and the average per-capita availability of GSL increased by $113, from $278 to $391.

In relationship to the gains on these two programs, the gain of $39 on the CWS program appears rather inconsequential. Likewise, the changes on SEOG and NDSL availability appear essentially nonexistent. Although the average per-capita availability for both of these programs was smaller the year after MISAA was implemented, the differences were quite small ($2 on SEOG and $16 on NDSL).

An inspection of Table 3.18 also provides insight as to the per-capita availability across student income levels. Except for the SEOG and NDSL programs, there was a consistent tendency for the per-capita availability of funds to increase after MISAA was enacted. The results for each program are discussed below.

In terms of BEOG awards, the increases were substantially greater among middle- and upper-income students than among low-income students. For example, the increase in per-capita availability of BEOG ranged from $194 for the fifth income level ($25-$29,999) to $355 for the third income level ($12-$17,999) for upper- to middle-income students, but only from $17 to $155 for low-income students.

The changes in per-capita availability of SEOG funds fluctuated only minimally over the two year period. The differences ranged from a low of $2 for the fourth income level ($18-$24,999) to a high of $13 for the fifth income level ($25-$29,999).

In terms of NDSL funds, although there were not major changes in the magnitude of available funds, there was a distinct trend towards a decrease in the per-capita availability to middle-income students. For students in the middle-income range, there was a reduction of $40 for incomes falling between $12,000-$17,999 and $51 for incomes between $18,000-$24,999.

The results for the final two programs, CWS and GSL, revealed similar trends in that there were fairly consistent increases across every income level. The gains were essentially the same across the income levels; middle-income students did not appear to gain appreciably more than the students in the other income levels.

Finally, in terms of the third research hypothesis, the findings reported in Table 3.18 indicate that there were rather dramatic increases in the per-capita availability of the total amount of Federal financial aid. There was a $329 expansion from the pre-MISAA average of $1,761 to the post-MISAA average of $2,090. While there were substantial gains across every income level, the greatest gains occurred for middle- and upper-income level students.

As in the two previous levels of analysis, the findings at this level clearly indicate that MISAA has had a positive impact in the distribution of financial assistance. The results provide demonstrable evidence that MISAA has drastically increased the amount of assistance to middle- and upper-income students without detracting support from low-income students. In fact, the results also indicate an increased level of funding to low-income students. The specific findings are summarized in Exhibit 3.7, according to the appropriate research question and hypothesis.

This chapter has presented the results of the impact of MISAA from three levels of analysis. Each level of analysis has provided convincing evidence of the positive and beneficial impact of MISAA upon the allocation of financial aid. The next chapter provides a synthesis and summary of the results.

EXHIBIT 3.7: SUMARRY OF FINDINGS, MACRO-LEVEL ANALYSIS

Research Question Findings	
I.1	The differences in the probability of BEOG award across student income levels were substantially smaller after MISAA was introduced than before its enactment.
I.2	As specified, there were significant increases among middle- and upper-income students in the probability of BEOG and GSL awards. In addition, there were significant differences in the following outcomes and groups: an increase among upper-income students in probability of CWS award; an increase among low-income students in probability of GSL award; and a decrease in probability of NDSL award among middle-income students.
I.3	As specified, there was a significant increase in the probability of receiving any form of Federal aid in the second year over the baseline year.
II.1	The per-capita availability was greater in the second year than in the first year in terms of BEOG, CWS, and GSL support.
II.2	The gains in the per-capita availability of BEOG funds for middle- and upper-income students was greater than the gains among low-income students. While there was a consistent trend for the per-capita availability of CWS and GSL support to increase, the gains were comparable across each income level.
II.3	The per-capita availability of the total amount of Federal financial aid was substantially greater for students in the resurvey than for those in the baseline.

END NOTES

1/Cook, T.D. and Campbell, D.T. Quasi-Experimental Design and Analysis Issues for Field Settings. Chicago: Rand McNally College Publishing Company, 1979.

2/Cohen, J. and Cohen, P. Applied Multiple Regression/Correlation Analyses for the Behavioral Sciences. New York: John Wiley and Sons, 1975.

3/This is an assumption of the analysis of covariance procedure. Simply stated, it requires that the relationship between the dependent variable and the covariates is not statistically different among the groups (i.e., packaging types).

4

CONCLUSIONS: SYNTHESIS AND SUMMARY OF THE EMPIRICAL RESULTS

INTRODUCTION

In this report, we have described an evaluation of the impact of the MISAA program, conducted through the use of a three-tiered analytical approach: an analysis of financial aid to cohorts of students before and after MISAA; a longitudinal examination of a sample of students before and after its enactment; and a macro-level analysis of the effect of MISAA on the relationship between income and aid. The use of multiple analytical strategies in the analysis of quasi-experimental studies such as the one described herein is becoming increasingly prevalent in the research literature as indicated by St. Pierre.[1/] By employing a range of analytical approaches and techniques, there is a higher probability of isolating and "triangulating" the "true" effects of a program.

The degree to which the results from the various analytical approaches converge provides an indication of the confidence we can place in our findings. Results which are consistent and invariant across a range of analytical approaches can be more confidently interpreted and believed than those which are variant across approaches.

Since the present evaluation of MISAA was only possible within a quasi-experimental design, in which causal inference is by definition more tentative, the multiple analytical approach was adopted in order to strengthen the evaluation. The results were remarkably consistent across the three separate analytical approaches. In fact, regardless of the analytical approach, the results yielded the same basic findings. This

convergence of results based on diverse analytical techniques provides strong and incontrovertible evidence of the positive and substantial impact of MISAA.

SYNTHESIS AND SUMMARY

Chapter 3 contained a very detailed description of the empirical results across each analytical approach. The specific results of each approach were summarized in Exhibits 3.3, 3.5, and 3.7.

In this section, the empirical results for each analytical approach are synthesized and summarized according to the effects of MISAA across student income levels. That is, what effects did MISAA have upon low-, middle-, and upper-income students? From such a synthesis, the differential impact of MISAA upon students from various income levels can be clearly detected. A synthesis of the results across each of the analytical approaches is presented below.

The cohort level of analysis, which focused upon contiguous cohorts before and after MISAA was enacted, revealed that MISAA's impact was not uniformly felt across the various levels of student income. The results of the analyses at this level point overwhelmingly to the greater impact of MISAA upon middle-income students than upon low- or upper-income students. The greater impact of MISAA upon middle-income students was due primarily to the increased availability of Basic Educational Opportunity Grants. Although there were increases in the proportion of recipients across all three income levels after MISAA was introduced, the expansion of middle-income recipients greatly overshadowed the gains of low-income recipients and was considerably larger than the gains of upper-income recipients. Across the sophomore and junior cohorts, for example, the gains among middle-income students were two to three times greater than the largest increase among low-income students. That is, the greatest gain among low-income students was only 11 percentage points whereas the middle-income recipients increased 26 and 37 percentage points among the sophomore and junior cohorts. There were also rather dramatic gains among upper-income recipients who increased 25 and 22 percentage points for the sophomore and junior cohorts, respectively.

The results of the cohort level analysis revealed that the changes were not restricted to the receipt of BEOG awards. There was a systematic tendency for middle- and upper-income students to receive a greater number of awards from GSL and CWS after MISAA was introduced than in the prior year. The findings also demonstrated that there was a trend towards a reduction in the proportion of NDSL recipients among low- and middle-income students in the posttest cohort groups. The reduction of NDSL recipients among middle- and low-income students probably reflects the greater availability of BEOG support which may have diminished the need to secure additional support through NDSLs.

The findings concerning the average value of the awards parallels the findings on the proportion of recipients in each year. That is, the changes were most dramatic among middle-income recipients of BEOG awards. Middle-income students gained substantially more money in BEOG awards than either low- or upper-income students. For example, the average award across middle-income sophomores and junior students jumped $405 and $470, respectively, as compared to a gain of only $149 and $220 among low-income sophomore and junior students. There were rather substantial gains among the upper-income students ($254 and $229 for sophomores and juniors, respectively) but, as in the proportion of recipients, the gains were not quite as extreme as the gains among middle-income students.

After BEOG support, the impact of MISAA was most visible in terms of the amount of GSL support. There was a consistent trend across every student income level for the average GSL awards to be greater the year after MISAA was introduced than in the prior year. Unlike the BEOG awards, however, there were not large discrepancies in the gains across student income levels in that low-income students tended to gain the same amount as middle- and upper-income students. Thus, there was a consistent trend for GSL awards to be higher after MISAA than before and for the gains to be uniformly spread over the various student income levels.

With regard to the other Federal financial assistance programs, the changes were not nearly as large and consistent as the post-MISAA effects on BEOG and GSL. While there was a generally consistent trend for the post-MISAA awards on SEOG and CWS to be larger than the pre-MISAA awards, the actual gains tended to be rather small across the various income levels. In terms of the average NDSL award, there was very little fluctuation over the two-year interval. Not only were there fewer middle-income recipients of NDSL, but there was a trend for these students to receive a smaller NDSL award after MISAA was introduced.

The longitudinal level of analysis which focused upon the same students prior to and after the enactment of MISAA comprised the second analytical approach. The results of this level of analysis confirmed and reinforced the findings reported in the cohort analysis.

Again, as in the cohort analysis, the impact of MISAA was most noticeable in terms of the disbursement of grants from BEOG. The percentage of post-MISAA BEOG recipients was substantially greater than the percentage of pre-MISAA BEOG recipients. The expanded diffusion of BEOG awards after the enactment of MISAA, however, was not uniformly distributed over the entire range of student incomes. The gains in the percentage of recipients were tremendously larger among middle- and upper-income students than among low-income students. For example, whereas the low-income recipients increased only three percentage points, the gain among middle- and upper-income students was 28 and 17 percentage points, respectively.

The second program most directly affected by MISAA was GSL. There was a positive association between the increase in the percentage of recipients and the income level of the students. Students in the low-income level gained only two percentage points, whereas middle- and upper-income students gained four and eight percentage points, respectively. Although there were significant gains in the percentage of post-MISAA GSL recipients, the most dramatic gains occurred among the upper-income students.

In terms of the percentage of recipients of SEOG and CWS, there were very little differences over the two-year interval. The most dramatic difference among these two programs occurred among the percentage of upper-income CWS recipients who increased significantly after the enactment of MISAA. The percentage of CWS recipients among these students increased from 17 to 22 percent.

In terms of the receipt of NDSL awards, there was only a minimal amount of variation in the percentage of low- and upper-income recipients over the two-year period. Among middle-income students, however, there was a significant and substantial reduction in the percentage of post-MISAA recipients. Prior to MISAA, 36 percent of these students were recipients of NDSL as compared to only 28 percent after MISAA was enacted. This finding was consistent with the previous results which indicated that financial support from NDSL was less needed among middle-income students after MISAA was introduced. By funneling more BEOG awards to middle-income students, there was less need among such students to secure an NDSL.

With respect to the average gains on the financial assistance programs, the findings indicate that the primary thrust of MISAA was upon the allocation of BEOG. Although there were substantial gains across each income level, the largest gains occurred among the income level of recipients to whom MISAA was directly intended to serve: middle-income students. The average gains in BEOG award were $289 for middle-income students, but only $190 and $81 for low- and upper-income students, respectively.

The Guaranteed Student Loan program was the second program most directly influenced by the introduction of MISAA. While there were rather substantial gains in the post-MISAA GSL awards, the greatest increase occurred among low-income recipients whose average gain was $209 compared to the $66 and $124 gain among middle- and upper-income students. This finding, coupled with the results on the percentage of recipients, indicates that although there was a greater increase in the percentage of upper- and middle-income recipients, the increase in the size of the award was greatest among low-income recipients.

In terms of the average gain in SEOG and CWS awards, there was a general trend for post-MISAA awards to be slightly higher than the pre-MISAA awards. There was very little variation in the amount of gain across student income levels. The differences in the average gains in these two outcomes did not vary significantly across the levels of student income. Likewise, there were no significant differences among the three student income levels in the average gain in NDSL awards. However, the results indicate that there were reductions in the size of NDSL awards after MISAA was introduced among middle- and upper-income students. Whereas low-income recipients gained $24, the size of awards to middle- and upper-income recipients was $62 and $66 lower than their awards prior to MISAA.

The third analytical approach, macro-level analysis, focused upon a comparison of aided students (middle-income) and nonaided students (low- and upper-income) the year prior to and the year after the enactment of MISAA. The results of this level of analysis supported and complemented the findings of the two previous analytical approaches.

As discussed in the first two chapters, previous research has indicated that there was a "middle-income gap" in the awarding of aid to middle-income students. MISAA was specifically created to redress such discrepancies in the treatment of middle-income students. The results of this level of analysis convincingly demonstrate that MISAA has substantially altered the distribution of Federal financial assistance to help minimize the "middle-income gap." This change in the distribution of aid was most vividly detected in the awarding of Basic Grants (Figure 3.1).

While the probability of receiving a BEOG award among middle- to upper-income students in the 1978-79 academic year ranged from a high of .47 to a low of .04, the corresponding range in the 1979-80 academic year extended from a high of .66 to a low of .09. Not only were there substantial changes in the probability of award after MISAA, but the differences in the receipt of an award were less variable over the levels of student-income. For example, prior to MISAA, the probabilities of award

dropped dramatically as student income increased, whereas after MISAA, the relationship between the probability of award and student income was more continuous. Although the overall relationship between receipt of a BEOG award and income level was negative for both years, as expected, the distribution pattern after MISAA reflected an increased commitment to increase the availability of grants to middle- and upper-income students.

The effect of MISAA in smoothing out the relationship between Federal financial aid and student income level was also evidenced in the probability of receiving any form of aid. Although there was a negative relationship between the receipt of any type of aid and student income level for both years, there were substantially smaller differences in the probability of an award across student income levels in the second year. For example, the difference between the first ($0-$5,999) and second ($6-$11,999) income levels was .047 in the first year, but only .013 in the second year. In addition to smoothing out the relationship between the receipt of aid and student income level, there was also a greater probability of award after the enactment of MISAA.

The macro-level analysis also yielded estimates of the per-capita availability of Federal financial support to students from various income levels. The per-capita availability provides an index of the amount of financial support which is available to students. It represents the pool of Federal financial aid upon which students in each income level can expect to draw.

The per-capita availability of Federal financial assistance across student income levels changed tremendously over the two-year interval in terms of BEOG support. While there were increases across each income level, the increases were substantially greater for middle-income students than for low- and upper-income students. There were also substantial changes in the per-capita availability of CWS and GSL support. For both programs, the gains were essentially the same across the different levels of student income. That is, the gain in per-capita availability of funds from these two programs for middle-income students did not appear appreciably larger than the gain across the other income levels.

In terms of the per-capita availability of SEOG and NDSL support, there was only a minimal amount of fluctuation over the two-year period. The only major change was in the decrease in the per-capita availability of NDSL to middle-income students. For students in the middle-income range, there was a reduction of $40 for those whose incomes were between $12,000-$17,999 and $51 for those whose incomes fell between $18,000-$24,999.

The findings at this level, as in the two previous levels, clearly demonstrate that MISAA has had a positive impact on the distribution of Federal financial assistance. The consistency of results across each analytical approach provide overwhelming empirical evidence that MISAA has achieved its goal of reaching more middle-income students while maintaining its commitment to low-income students.

CONCLUSION

The results indicate that MISAA has greatly enlarged the level of Federal financial support to middle- and upper-income students without undermining the Federal government's commitment to low-income students. Not only were more middle- and upper-income level students brought under the umbrella of Federal financial assistance after MISAA was implemented than in the prior year, but they also received considerably more money. Thus, MISAA's influence can be detected on two levels: it caused a change in the distributional pattern of awards as well as a change in the amount of aid to recipients.

The most obvious and visible changes brought about by MISAA can be detected in the distribution of BEOG support. Across all three analytical approaches, the empirical evidence convincingly demonstrates that the percentage of recipients and the average awards increased tremendously after MISAA was implemented. MISAA resulted in a greater diffusion of BEOG support over the entire range of student income levels. While there were significant gains in the percentage of recipients and the average awards across each of the various levels of student income, the largest gains occurred among middle- and upper-income students.

The second program which was most directly influenced by MISAA in terms of distributional patterns and average awards was GSL. After MISAA was introduced, there was a significant increase in the percentage of recipients overall and, in particular, the percentage of upper-income students receiving aid. Across all income levels, there was a distinct trend for a greater number of students to receive a GSL award after MISAA, and a concommitant tendency for the GSL recipients to receive a greater amount of GSL support.

The third Federal financial assistance program which appeared most directly influenced by MISAA was NDSL. While on the two previous outcomes there were rather substantial increases in both the number of recipients and the size of the awards, the results of the three analytical approaches consistently demonstrated that there was a trend toward reduction in NDSL support. This trend was evidenced both in terms of the percentage of recipients and the size of the awards. These results were primarily detected among middle-income recipients across the three analytical approaches. As mentioned in the previous chapter, this decline, however, should not necessarily be interpreted as a negative effect of MISAA. On the contrary, the greater availability of Federal financial assistance through programs such as BEOG and GSL and the larger awards to recipients of aid most likely diminished the need for middle-income students to assume NDSLs. This trend was not noticeable among low-income students and was only slightly evident among upper-income level students.

The results on SEOG awards were not nearly as consistent and dramatic as the previous three programs. The cohort analysis revealed significant increases in the proportion of middle-income SEOG recipients as well as in the average SEOG award across student income levels. While none of the gains on SEOG were significant in the longitudinal and macro-level analysis, the direction of effects leads us to believe that while the effect on SEOG was minimal, there was a generally positive trend toward at least maintaining the previous year's commitment. Where there were changes, they most often tended to be positive, in terms of both the number of recipients and the amount of support.

In terms of CWS, the results across all three analytical approaches indicate that MISAA exerted a positive impact in the distribution and allocation of CWS aid. Although the gains in the number of recipients and the size of awards were not nearly as large as the gains on BEOG and GSL, the overall results show that there was a positive effect on CWS. The results suggest that, in terms of the proportion of recipients, the greatest effects occurred among the upper-income students, while, in terms of gains in the size of awards, the greatest effect was among low-income students.

In conclusion, the consistency of results provides indisputable evidence of the positive impact of MISAA upon all students in general, and upon middle-income students in particular. Among middle- and upper-income students, the results indicate that grants (BEOG) were more available after the enactment of MISAA, as was assistance through work (CWS) and loans (GSL). The empirical evidence demonstrates that the Federal financial assistance programs were able to reach a broader spectrum of students after the enactment of MISAA while still maintaining the Federal government's commitment to low-income students. The results convincingly demonstrate that MISAA has tended to change the distribution of Federal financial assistance to achieve a more equitable dispensation of aid across the various levels of student income.

END NOTES

1/ St. Pierre, R.G., "The Role of Multiple Analyses in Quasi-Experimental Evaluations," Educational Evaluation and Policy Analysis, Volume I, 1979, pp. 29-35.

APPENDICES

APPENDIX A

DATA COLLECTION INSTRUMENTS AND STUDENT FOLLOW-UP LETTERS

Applied Management Sciences, Inc.
Silver Spring, Maryland
Study of Program Management Procedures
in the Campus-Based and Basic Grant Programs
(MISAA Effects Follow-up):

RECORD REVIEW FORM

INFORMATION FROM FINANCIAL AID RECORDS
FOR STUDENTS RECEIVING ASSISTANCE IN
THE 1979-80 ACADEMIC YEAR

OMB No.: 51-S-78036
Approval Expires: 12/31/79

FOR OFFICE USE ONLY--LEAVE THIS AREA BLANK.

INSTITUTION CODE ☐☐☐☐☐☐ 1-6

STUDENT NUMBER ☐☐☐ 7-9

10="7"

11-12="01"

General Instructions:

All information should be transcribed from the sample of selected student records. Data can be entered on this form by circling the appropriate response, or by recording numbers in the boxes provided for this purpose. All boxes should be filled, using zeroes as needed:

EXAMPLE: *household size is three people:* 03

EXAMPLE: *parental income is $9,500:* $ 09500

EXAMPLE: *student income is zero:* $ 00000

EXAMPLE: *income is unknown:* $ 99999

Please record financial data to the nearest whole dollar.

ENTER: STUDENT STATUS

Current Aid Recipient 1
Aid Applicant/Non-Recipient . . . 2
Withdrawn Student . . . . . 3 — 13

SECTION A: CLASSIFICATION INFORMATION

1. Enter the student's YEAR OF BIRTH: (*If no data, code = 99.*) 19☐☐ — 14-15

2. SEX: (*Circle only one*)
Male 1
Female 2
No data available. . . . . 3 — 16

3. ETHNICITY: (*Circle only one*)
American Indian or Alaskan Native 1
Asian or Pacific Islander 2
Black, not of Hispanic origin 3
Hispanic. 4
White, not of Hispanic origin 5
No data available . . . . . 6 — 17

4. MARITAL STATUS: (*Circle only one*)
Single (or never married). 1
Married. 2
Separated. 3
Divorced 4
Widowed. 5
No data available. . . . . 6 — 18

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5. Is tuition based on the student's residence status? If yes, for tuition purposes, what residence status applies to this student? *(Circle only one)*

No: Tuition is not based on resident status	1	19
Yes: For tuition purposes, this student is a:		
.. District/county resident	2	
.. State resident	3	
.. Non-state resident	4	
.. Foreign student	5	
No data available	6	

6. Student's PRESENT LIVING ARRANGEMENT: *(Circle only one)*

On campus	1	20
Off campus, with parents	2	
Off campus, not with parents	3	
No data available	4	

7. Student's FINANCIAL DEPENDENCY STATUS: *(Circle only one)*

Financially dependent	1	21
Financially independent	2	
No data available	3	

8. Total SIZE OF HOUSEHOLD: *(If no data available, code = 99)* ☐☐ 22-23

9. Number of people in this household enrolled half-time or more in a postsecondary institution: *(Unless he or she has withdrawn, INCLUDE THIS STUDENT in the count.)* *If no data is available, code = 99)* ☐☐ 24-25

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10. Student's CURRENT CLASS LEVEL: (*Circle only one*)

Freshmen (or First-Year Vocational/Technical)	01	
Sophomore (or Second-Year Vocational/Technical)	02	
Junior	03	
Senior	04	26-27
Fifth-year undergraduate	05	
No data available	06	
Other (*specify*): _____	07	28-29 ☐☐

11. Student's CURRENT ENROLLMENT STATUS: (*Circle only one*)

First-time entering student (*freshmen, first-term graduate students, etc.*)	1	
Continuing student	2	30
Transfer student	3	
No data available	4	

12. Student's SAT/ACT SCORES:

SAT Scores

Verbal (*If no data available, code = 999*)	☐☐☐	31-33
Mathematics (*If no data available, code = 999*)	☐☐☐	34-36

ACT Scores

English Expression (*If no data available, code = 99*)	☐☐	37-38
Social Studies Reading (*If no data available, code = 99*)	☐☐	39-40
Science Reading (*If no data available, code = 99*)	☐☐	41-42
Mathematics (*If no data available, code = 99*)	☐☐	43-44
Total Score (*If no data available, code = 99*)	☐☐	45-46

13. Student's HIGH SCHOOL PERCENTILE RANK: (*Circle only one*)

Top quarter	1	
Second quarter	2	
Third quarter	3	47
Bottom quarter	4	
No data available	5	

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14. FIELD OF STUDY: (*Circle only one*)

Agriculture, natural resources and home economics	01	48-49
Biological sciences	02	
Business and management	03	
Commerce technologies	04	
Computer science/technologies	05	
Education	06	
Engineering	07	
Fine arts, languages and letters	08	
Law	09	
Mechanical, engineering and natural science technologies	10	
Medicine	11	
Nursing	12	
Other health professions and technologies	13	
Physical sciences and mathematics	14	
Public affairs and public service technologies	15	
Social sciences and psychology	16	
General arts and sciences or undecided	17	
No data available	18	
Other professional disciplines (*specify*)_____	19	50-51

15. Student's CURRENT (this term) COURSE LOAD: (*Enter number of credit hours or clock hours. Circle one code to denote whether credit or clock hours is applicable; circle one code to denote whether student is considered full-time or part-time*)

A. Credit/clock hours: ☐☐ 52-53

B. Number are:

Credit hours	1	54
Clock hours	2	

C. Student is considered:

Full-time	1	55
Part-time	2	

16. GRADE POINT AVERAGE (*If no data available code = 99*) ☐☐.☐ 56-58

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SECTION B: FINANCIAL AID INFORMATION (*If data are available, code = 99999*)

17. Student's CURRENT NINE-MONTH ACADEMIC YEAR BUDGET: $ ☐☐☐☐☐ 59-63

18. Income Sources (*Record exact amount and check box to indicate source. If possible use IRS 1040, next use SER, and lastly use need analysis form or other record.*)

11-12="02"

	AMOUNT	SOURCE USED: 1040	SER	Other	
Non-taxable income (Social Security, Child Support, Welfare, etc.)	$ ☐☐☐☐☐		☐	☐	13-17,18,19
Adjusted gross income	$ ☐☐☐☐☐	☐	☐	☐	20-24,25,26,27
Earnings of second earner	$ ☐☐☐☐☐	☐	☐	☐	28-32,33,34,35
Federal taxes paid	$ ☐☐☐☐☐	☐	☐	☐	36-40,41,42,43
Medical/dental expenses	$ ☐☐☐☐☐	☐	☐	☐	44-48,49,50,51
Casualty/theft loss	$ ☐☐☐☐☐	☐	☐	☐	52-56,57,58,59
Elementary/high school tuition	$ ☐☐☐☐☐		☐	☐	60-64,65,66
Home Equity (value-mortgage)	$ ☐☐☐☐☐		☐	☐	67-72,73,74
Other Equity (investments or other real estate: total value - debts)	$ ☐☐☐☐☐		☐	☐	11-17="03" 13-18,19,20
Business Equity[(value - debts)x % ownership]	$ ☐☐☐☐☐		☐	☐	21-26,27,28
Farm Equity[(value - debts) x % ownership]	$ ☐☐☐☐☐		☐	☐	29-34,35,36
Cash, Savings, etc.	$ ☐☐☐☐☐		☐	☐	37-42,43,44

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19. FAMILY CONTRIBUTION for the current academic year:

Calculated parental contribution (If negative put "-" in first box)	$	45-49
Student Eligibility Index (SEI)		50-53
Student's summer earnings (Non-CWS)	$	54-58
Student's contribution from assets	$	59-63
Student's academic year earnings, exclusive of CWS or other aid	$	64-68
Spouse's contribution	$	69-73
Student's total veteran's benefits (Monthly amount x months)	$	74-78
		11-12="04"
Student's total social security benefits (monthly amount x months)	$	13-17
Other (specify): _____	$	18-22
		23-24

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20A. TYPES AND AMOUNTS OF FINANCIAL AID RECEIVED: (*All amounts should be for the current academic year; if shown for only one semester, double all amounts. Please specify all "Other" kinds of assistance received by the student, and code the SOURCE of each using the following codes. If data are not available, code = 9999. DO NOT RECORD AID THAT WAS REFUSED.*)

1 = State grant;
2 = Institutional grant--need-based;
3 = Institutional grant--ability-based;
4 = Tuition remission;
5 = Private, non-institutional grant;
6 = Other Federal grant;
7 = Other non-Federal loan; and
8 = Other or source unknown.

Basic Educ. Opp. Grant (BEOG)	$ ☐☐☐☐	25-28
Supplemental EOG (SEOG)	$ ☐☐☐☐	29-32
Nat'l Direct Student Loan (NDSL)	$ ☐☐☐☐	33-36
College Work-Study (CWS)	$ ☐☐☐☐	37-40
Guaranteed Student Loan (GSL)	$ ☐☐☐☐	41-44
Other (specify): _____ _____	$ ☐☐☐☐	45-48
	☐☐	49-50
	Source code: ☐	51
Other (specify): _____ _____	$ ☐☐☐☐	52-55
	☐☐	56-57
	Source code: ☐	58
Other (specify): _____ _____	$ ☐☐☐☐	59-62
	☐☐	63-64
	Source code: ☐	65
Other (specify): _____ _____	$ ☐☐☐☐	66-69
	☐☐	70-71
	Source code: ☐	72

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11-12="05"

20B. Did the student reject or refuse any financial aid? No.... 1 — 13

Yes... 2

IF YES: What aid and what amounts?

Type of Aid: _____ ☐☐ 14-15

Amount: $ ☐☐☐☐ 16-19

Type of Aid: _____ ☐☐ 20-21

Amount: $ ☐☐☐☐ 22-25

21. Does student have a CURRENT CWS JOB? If YES: indicate where. (If more than one, report the job on which student works the most hours. Circle only one.)

No: Student does not have a current CWS job 1

Yes: On campus. 2

Yes: Off campus . . . . . 3 — 26

No data available. 4

IF YES: type of CWS job is..... _____ ☐☐ 27-28

22. Did you find any inconsistencies among the documents in the file?

Yes 1

No . . . . . 2 — 29

O.M.B. No. 51-S-78036
Approval Expires 12/31/79

Institution Code

Student Code

APPLIED MANAGEMENT SCIENCES

962 Wayne Avenue • Suite 701 • Silver Spring, Maryland 20910
Telephone 301 585-8181

Fall, 1979

Dear Student:

Earlier this year, many students provided information on how they were financing their educations, in order to help the U.S. Office of Education and the Congress in Washington understand how Federal student aid programs are working and how they might be improved. Some of you may have even participated in this earlier effort, and we thank you for making it a success.

One of the main issues that surfaced in this research was a concern on the part of both students and financial aid officers over the fairness and equity of the distribution of Federal aid to different kinds of persons. Although all of these issues have not yet been resolved, some changes have been made, particularly with regard to the "middle income" students. Specifically, USOE has implemented the Middle Income Student Assistance Act (MISAA) which is aimed at helping the middle income student while retaining its original commitment to the low income student.

Now, in the Fall of 1979, as a result of these changes the government has decided that this presents a good opportunity to find out what the effects of these changes have been, by resurveying postsecondary students. Some of you are being recontacted from our earlier study while the rest of you have been randomly selected from the schools which you are currently attending. Regardless of how you were selected, and whether or not you are presently receiving student aid, it is important that you respond--your individual circumstances are of significance to the decision-making process. Moreover, without complete responses, our resulting conclusions may not accurately reflect the status of today's post-secondary student. For your time, we will send you $3.00 upon receipt of the completed questionnaire.

As we emphasized before, a great deal is at stake for both schools and students since Federal student aid represents a substantial share of all funds used to support postsecondary education. Moreover, all of the student assistance programs will be undergoing reauthorization during the Spring of 1980 and it is critical that changes be made on accurate information about your needs. The fact that billions of dollars are involved has led the Congress to authorize this survey by law (Section 416, the General Education Provision Act as amended [20 USC 1226c]). The Congress has also

acted to protect the privacy of citizens who cooperate with such surveys (the Privacy Act of 1974, PL 93-579). Neither the government nor your school will see your response. The data will be keypunched for statistical analyses, and all identifying numbers and the forms themselves will be destroyed. You need not record your name. We welcome extra comments; over 400 were received last Spring, and were summarized and distributed, using anonymous extracts to convey the flavor of what students had to say.

The form can be completed in less than half an hour. When you complete the questionnaire, slip it into the enclosed envelope and mail it.

Thank you very much for your time and your help.

Sincerely yours,

APPLIED MANAGEMENT SCIENCES, INC.

Robert T. Deane

Robert T. Deane, Ph.D.
Vice-President

RTD/bw

Enclosures: Questionnaire
Return Envelope

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1-9=ID

10="5"

11-12="0"

SECTION A: GENERAL INFORMATION

1. DATE OF BIRTH: month [ ] year [ ] 13-16

FOR EACH OF THE FOLLOWING ITEMS, PLEASE CIRCLE THE APPROPRIATE RESPONSE.

2. SEX:

Male	1	17
Female	2	

3. WHAT IS YOUR RACE/ETHNICITY? (*Circle only one.*)

American Indian or Alaskan Native	1	
Asian or Pacific Islander	2	
Black, not of Hispanic origin	3	18
Hispanic	4	
White, not of Hispanic origin	5	

4. MARITAL STATUS:

Single	1	
Married	2	
Separated	3	19
Divorced	4	
Widowed	5	

5. IS YOUR TUITION BASED ON YOUR PLACE OF RESIDENCE? (THAT IS, DO YOU ATTEND A STATE OR COMMUNITY COLLEGE WHERE NONRESIDENTS HAVE TO PAY MORE?) IF YES, FOR TUITION PURPOSES, WHAT RESIDENCE STATUS APPLIES TO YOU? (*Circle only one.*)

No, tuition is <u>not</u> based on place of residence	1	
Yes, tuition is based on place of residence. I am a:		
District/county resident	2	20
State resident	3	
Non-state resident	4	
Foreign student	5	

6. WHICH OF THE FOLLOWING BEST DESCRIBES YOUR PRESENT LIVING ARRANGEMENT?

On-campus	1	21
Off-campus with parents	2	
Off-campus <u>not</u> with parents	3	

7. IN TERMS OF THE RULES GOVERNING FEDERAL STUDENT AID, ARE YOU A <u>DEPENDENT</u> OR <u>INDEPENDENT</u> STUDENT? (*Circle only one.*)

I am a <u>DEPENDENT STUDENT</u> (e.g., I have been claimed as an exemption for income tax purposes in either of the past two years; or I have received more than $600 per year from my parents in the past two years; or I have lived in the home of my parents for more than two consecutive weeks per year in the past two years)	1	22
I am an <u>INDEPENDENT (SELF-SUPPORTING) STUDENT</u> (e.g., I have <u>not</u> been claimed as an exemption by any person (other than spouse) for income tax purposes in either of the past two years; and I have <u>not</u> received more than $600 per year from my parents in the past two years; and I have <u>not</u> lived in the home of my parents for more than two consecutive weeks per year in the past two years)	2	

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8A. DO YOU SUPPORT ANY PERSON OTHER THAN YOURSELF?

Yes . . .	1	23
No. . . .	2	

8B. IF YES, HOW MANY?

Spouse.	1	24
Children. . .		25-26
Other		27-28

9. WHAT WAS YOUR TOTAL INCOME IN 1978 BEFORE TAXES? CONSIDER TOTAL INCOME FROM ALL SOURCES (INCLUDING SPOUSE), AND INCLUDING SOCIAL SECURITY OR OTHER NON-TAXABLE SOURCES, BUT EXCLUDING STUDENT FINANCIAL AID. (*Circle only one.*)

Nothing.	01	29-30
Less Than $1,500 . . .	02	
$ 1,500 - $ 2,999. . .	03	
$ 3,000 - $ 5,999. . .	04	
$ 6,000 - $ 8,999. . .	05	
$ 9,000 - $11,999. . .	06	
$12,000 - $14,999. . .	07	
$15,000 - $17,999. . .	08	
$18,000 - $20,999. . .	09	
$21,000 - $24,999. . .	10	
$25,000 - $29,999. . .	11	
$30,000 - $34,999. . .	12	
$35,000 or more . . .	13	

10. WHAT WAS YOUR PARENTS' APPROXIMATE ANNUAL INCOME IN 1978 BEFORE TAXES? CONSIDER INCOME FROM ALL SOURCES, INCLUDING SOCIAL SECURITY OR OTHER NON-TAXABLE INCOME. (*Circle only one.*)

Don't know	01	31-32
Less than $1,500 . . .	02	
$ 1,500 - $ 2,999. . .	03	
$ 3,000 - $ 5,999. . .	04	
$ 6,000 - $ 8,999. . .	05	
$ 9,000 - $11,999. . .	06	
$12,000 - $14,999. . .	07	
$15,000 - $17,999. . .	08	
$18,000 - $20,999. . .	09	
$21,000 - $24,999. . .	10	
$25,000 - $29,999. . .	11	
$30,000 - $34,999. . .	12	
$35,000 or more. . . .	13	
Parents deceased . . .	14	

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11A. ALL STUDENTS: HOW MANY PERSONS ARE IN YOUR PARENTS' HOUSEHOLD? (INCLUDE PARENTS, BROTHERS, SISTERS, OTHERS WHO ARE DEPENDENT UPON YOUR PARENTS FOR SUPPORT, AND YOURSELF, IF APPLICABLE; IF YOU'RE A DEPENDENT (NON-SELF-SUPPORTING) STUDENT, BE SURE TO COUNT YOURSELF; INDEPENDENT STUDENTS SHOULD NOT COUNT THEMSELVES.) . . . . . ☐ 33-34

11B. INDEPENDENT (SELF-SUPPORTING) STUDENTS ONLY: HOW MANY PERSONS ARE IN YOUR HOUSEHOLD? (IF DIFFERENT FROM YOUR PARENTS' HOUSEHOLD, COUNT YOURSELF PLUS ANYONE WHO IS DEPENDENT ON YOU.) . . . . . ☐ 35-36

12A. ALL STUDENTS: HOW MANY PERSONS IN YOUR PARENTS' HOUSEHOLD ARE ATTENDING A COLLEGE OR A POST HIGH SCHOOL VOCATIONAL/TECHNICAL SCHOOL? (IF YOU COUNTED YOURSELF FOR QUESTION 11A, COUNT YOURSELF HERE.). . . . . ☐ 37-38

12B. INDEPENDENT STUDENTS ONLY: HOW MANY PERSONS IN YOUR HOUSEHOLD ARE ATTENDING A COLLEGE OR A POST HIGH SCHOOL VOCATIONAL/TECHNICAL SCHOOL? (IF DIFFERENT FROM YOUR PARENTS' HOUSEHOLD, COUNT YOURSELF PLUS ANYONE ELSE IN YOUR HOUSEHOLD WHO IS GOING TO SCHOOL.). . . . . ☐ 39-40

13A. ARE YOUR PARENTS HELPING TO PAY FOR THE COLLEGE OR POST HIGH SCHOOL VOCATIONAL/TECHNICAL EDUCATION OF YOUR BROTHER(S) AND/OR SISTER(S) THIS ACADEMIC YEAR (EXCLUDING YOURSELF)?

Yes. 1 42
No 2
Not applicable 3

13B. IF YES, HOW MANY? . . . . . ☐ 42-43

14. ARE YOU NOW OR HAVE YOU EVER PARTICIPATED IN ANY OF THE FOLLOWING PROGRAMS? (*Check all that apply.*)

Upward Bound. . . . . ☐ 44
Talent Search . . . . . ☐ 45
Special Services Program. . ☐ 46

15. WHAT WAS YOUR ACADEMIC ACHIEVEMENT, AS MEASURED BY GRADES, IN HIGH SCHOOL? (*Circle only one.*)

High school equivalency test 1 47
Mostly A's (a numerical average of 90-100. 2
About half A's and half B's (85-89). . . . 3
Mostly B's (80-84) 4
About half B's and half C's (75-79). . . . 5
Mostly C's (70-74) 6
About half C's and half D's (65-69). . . . 7
Mostly D's (60-64) 8
Mostly below D's (below 60). 9

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16. DID YOU EVER RECEIVE FINANCIAL AID COUNSELING FROM YOUR HIGH SCHOOL (E.G., COUNSELORS, TEACHERS, COACHES, ASSEMBLIES, ETC.)?

Yes . . . . . 1 | 48
No 2

SECTION C: WORK EXPERIENCE

17. DO YOU WORK WHILE ATTENDING SCHOOL (EXCLUDING PARTICIPATION IN THE FEDERAL COLLEGE WORK-STUDY PROGRAM*)?

Yes. . . . . 1 | 49
No (*Skip to 21*). 2

* NOTE: The Federal College Work-Study Program is a form of financial aid that helps underwrite self-help work opportunities for students. It does not include any other form of work and in particular it does not include other forms of work-study, like cooperative education programs, that your school may have. All forms of work should be counted in answering questions 17-20, except work under this federal program. These jobs are taken up explicitly in questions 21-23, below.

18. HOW MANY HOURS PER WEEK DO YOU WORK WHILE ATTENDING SCHOOL (EXCLUDING THE COLLEGE WORK-STUDY PROGRAM)?

[ ] hours | 50-51

19. DID THE SCHOOL ASSIST YOU IN FINDING THIS JOB (EXCLUDING THE COLLEGE WORK-STUDY PROGRAM)? *If you have more than one job, please answer for the one you work at the most.*

Yes 1
No . . . . . 2 | 52

20. HOW MUCH DO YOU EARN PER HOUR (EXCLUDING THE COLLEGE WORK-STUDY PROGRAM)? *If you have more than one job, please answer for the one you work at the most.*

$ [ ] | 53-56

21. DO YOU NOW PARTICIPATE IN A FEDERALLY-SUPPORTED COLLEGE WORK-STUDY PROGRAM RUN BY THE FINANCIAL AID OFFICE AT YOUR SCHOOL?

Yes . . . . . 1 | 57
No (*Skip to Q.24a*). . . . 2

22. HOW MANY HOURS PER WEEK DO YOU NOW PARTICIPATE IN COLLEGE WORK-STUDY?

[ ] hours | 58-59

23. HOW MUCH DO YOU EARN PER HOUR IN COLLEGE WORK-STUDY?

$ [ ] | 60-63

24A. DID YOU WORK DURING THE PAST SUMMER?

Yes . . . . . 1 | 64
No (*Skip to Q.25*) 2

24B. WHAT WERE YOUR TOTAL EARNINGS LAST SUMMER (BEFORE TAXES)?

Federal College Work-Study . . . . $ [ ] .00 | 65-68

All Other Summer Work. . . . . $ [ ] .00 | 69-72

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SECTION D: POST-HIGH SCHOOL EXPERIENCE

25. WHAT IS YOUR CURRENT CLASS LEVEL? (*Circle only one.*)

College freshman or first-year vocational/technical student.	01	73-74
College sophomore or second-year vocational/technical student . .	02	
College junior.	03	
College senior.	04	
Fifth-year undergraduate.	05	
Other _____ (specify)	06	75-76 ☐

26. ARE YOU A:

Entering student. . .	1	
Continuing student. .	2	77
Transfer student. . .	3	

27. WHAT MAJOR AREA OF STUDY ARE YOU PURSUING? (*Circle only one. If your field doesn't clearly fit the categories supplied below, write it under "Other Professions," below.*) 11-12-"02"

Agriculture, Natural Resources and Home Economics.	01	13-14
Biological Sciences.	02	
Business and Management.	03	
Commerce Technologies (e.g., secretarial, cosmetology, and other business/commercial one- or two-year programs)	04	
Computer Science/Technologies.	05	
Education.	06	
Engineering.	07	
Fine Arts, Languages and Letters	08	
Law.	09	
Mechanical, Engineering and Natural Science Technologies (one- or two-year programs)	10	
Medicine	11	
Nursing.	12	
Other Health Professions and Technologies.	13	
Physical Sciences and Mathematics.	14	
Public Affairs and Public Service Technologies	15	
Social Sciences and Psychology	16	
General Arts and Sciences or Undecided	17	
Other Professions/Disciplines _____ (specify)	18	15-16 ☐

28. WHAT COURSE LOAD ARE YOU CARRYING? (*Circle only one.*)

Less than half-time course of study (*less than 6 credit hours for college students or less than 12 clock hours per week for vocational students*)	1	17
Half-time course of study (*a minimum of 6 credit hours for college students or 12 clock hours per week for vocational students*)	2	
Three-quarter time course of study (*a minimum of 9 credit hours for college students or 18 clock hours per week for vocational students*)	3	
Full-time course of study (*a minimum of 12 credit hours for college students or 24 clock hours per week for vocational students*)	4	

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29. WERE YOU ENROLLED IN THIS SCHOOL LAST GRADING PERIOD? — 18

Yes 1
No 2

30. WHAT WAS YOUR GRADE POINT AVERAGE LAST GRADING PERIOD? IF YOU DON'T KNOW, WRITE IN "DK." — 19-22

EXAMPLE: 2.35 = [2] · [3][5]

[ ] · [ ]

31. HOW MANY MONTHS WILL YOU ATTEND SCHOOL BETWEEN SEPTEMBER 1979 AND JUNE 1980? — 23-24

months [ ]

32. FOR THE MONTHS YOU WILL ATTEND SCHOOL DURING THIS PERIOD, WHAT WILL BE YOUR EDUCATIONAL EXPENSES? HOW MUCH WILL BE PAID BY YOUR PARENTS?

	AMOUNT OF EXPENSES	PERCENT PAID BY PARENTS	
Tuition and fees	$ [ ][ ][ ][ ]	[ ]%	25-28, 29-30
Books, supplies and course materials	$ [ ][ ][ ][ ]	[ ]%	31-33, 34-35
Room or housing	$ [ ][ ][ ][ ]	[ ]%	36-39, 40-41
Food or supplies	$ [ ][ ][ ][ ]	[ ]%	42-45, 46-47
Spending allowance (e.g., transportation, medical/dental, clothing, recreation, etc.)	$ [ ][ ][ ][ ]	[ ]%	48-51, 52-53

SECTION E: FINANCIAL AID

33. PLEASE INDICATE THE SOURCE(S) OF MONEY YOU WILL HAVE RECEIVED IN FINANCIAL AID FOR THIS SCHOOL YEAR. (*Check all that apply.*)

Grants or Scholarships:

- Basic Educational Opportunity Grant . . . . . [ ] 54
- Supplemental Educational Opportunity Grant. . . . . [ ] 55
- State Scholarship or Grant. . . . . [ ] 56
- Local or Private Scholarship or Grant . . . . . [ ] 57

College Work Study. . . . . [ ] 58

Loans:

- Federal Insured or State Guaranteed Student Loan. . . . . [ ] 59
- National Direct Student Loan. . . . . [ ] 60
- Other Loan. . . . . [ ] 61

Full-Time Work. . . . . [ ] 62

Part-Time or Summer Work (other than the above) . . . . . [ ] 63

Savings . . . . . [ ] 64

Spouse. . . . . [ ] 65

Your G.I. Benefits. . . . . [ ] 66

Your Parent's G.I. Benefits . . . . . [ ] 67

Social Security Dependent Benefits. . . . . [ ] 68

Other _____ (specify) . . . . . [ ] 69

70-71 [ ]

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34A. DID YOU APPLY FOR FINANCIAL AID THIS YEAR -- THAT IS, FOR 1979-80?

Yes . . . . . 1 — 13
No 2

34B. WHY NOT? (*Check all that apply.*)

I did not know about financial aid . . . . . ☐ 14

My parents did not want to complete the financial statement. . . . . ☐ 15

I did not think I was eligible for financial aid. . . . . ☐ 16

My grades were too low to receive financial aid. . . . . ☐ 17

I could not get aid because I enrolled part-time. . . . . ☐ 18

Financial aid application forms and procedures were too long and complicated for me . . . . . ☐ 19

Other_____ (*specify*) . . ☐ 20

21-22 ☐

Questions 35A-39 are for students who applied for financial aid (including loans) this year. If you did not apply for financial aid, you have completed this questionnaire. Thank you for your cooperation.

35A. DID YOU APPLY SPECIFICALLY FOR ANY OF THESE FIVE FINANCIAL AID PROGRAMS? BASIC EDUCATIONAL OPPORTUNITY GRANT (BEOG), SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANT (SEOG), NATIONAL DIRECT STUDENT LOAN (NDSL), COLLEGE WORK-STUDY (CWS), OR GUARANTEED STUDENT LOAN (GSL)? (*Circle only one.*)

Yes. . . . . 1 — 23
No 2
Don't know, I applied for financial aid in general 3

35B. WHICH ONE(S)? (*Check all that apply.*)

Basic Educational Opportunity Grant . . . . . ☐ 24

Supplemental Educational Opportunity Grant . . . . . ☐ 25

National Direct Student Loan (obtained through your school). . . . ☐ 26

College Work-Study . . . . . ☐ 27

Guaranteed Student Loan (usually obtained through a bank, sometimes through your school) . . . . . ☐ 28

If you checked 'No' in Question 35A, you have completed this questionnaire. Thank you for your cooperation.

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36. WHERE DID YOU OBTAIN YOUR FINANCIAL AID APPLICATION FORM(S)? (*Check all that apply.*)

High school	☐	29
Public Library	☐	30
Your school's Financial Aid Office	☐	31
Other location on-campus	☐	32
State and/or local government (e.g., social security office, etc.)	☐	33
Directly from the U.S. Office of Education	☐	34
Other _____ (*specify*)	☐	35
		36-37 ☐

37. WHICH FINANCIAL AID APPLICATION FORM(S) DID YOU SUBMIT? (*Check all that apply. If you can't recall, write in "DK" under "Other."*)

Institution Application Form	☐	38
College Scholarship Service Financial Aid Form (FAF)	☐	39
American College Testing Program Family Financial Statement	☐	40
Pennsylvania Higher Education Assistance Form	☐	41
BEOG Application Form	☐	42
State Aid Form	☐	43
Other (e.g., SAFE, Donnelly/Richardson, etc.). (*specify*): _____	☐	44
		45-46 ☐

38A. DID SOMEONE ELSE COMPLETE YOUR FINANCIAL AID APPLICATIONS FOR YOUR SIGNATURE, OR ASSIST YOU IN DEVELOPING INFORMATION PROVIDED ON YOUR APPLICATION?

Yes, completed	1	47
Yes, assisted	2	
No	3	

38B. WHO PROVIDED THIS SERVICE OR ASSISTANCE? (*Check all that apply.*)

The Financial Aid Office	☐	48
Someone else at this school	☐	49
A private firm or consultant	☐	50
A family member	☐	51
A friend	☐	52
Other _____ (*specify*)	☐	53
		54-55 ☐

39. WHAT WAS THE LATEST POSSIBLE DATE THAT YOU COULD HAVE BEEN TOLD THE AMOUNT OF YOUR AWARD(S) AND STILL HAVE BEEN ABLE TO ATTEND CLASSES -- THE POINT WHERE YOU HAD TO KNOW YOUR FINAL EDUCATIONAL FINANCIAL SITUATION IN ORDER TO BE ABLE TO CONTINUE YOUR SCHOOLING?

Month ☐ Day ☐ 56-59

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Questions 40-48 are for students who receive financial aid under any of these five programs: Basic Educational Opportunity Grant (BEOG), Supplemental Educational Opportunity Grant (SEOG), National Direct Student Loan (NDSL), College Work-Study (CWS), or Guaranteed Student Loan (GSL). If you do not receive financial aid under any of these programs, you have completed this questionnaire. Thank you for your cooperation.

NATIONAL DIRECT STUDENT LOAN

40. WERE YOU AWARDED A NATIONAL DIRECT STUDENT LOAN THIS YEAR -- THAT IS, 1979-80?

Yes. . . . . 1 — 60
No (skip to Q.43a) . 2

41A. WERE YOU COUNSELED BY YOUR FINANCIAL AID OFFICER OR LOAN OFFICER ABOUT YOUR LOAN?

Yes. . . . . 1 — 61
No 2

41B. WHEN? (*Circle only one.*)

Prior to receiving my loan . 1
Upon receiving my loan . . . 2 — 62
After receiving my loan. . . 3

42. AT THE TIME THE LOAN WAS ISSUED, WERE YOU TOLD THE TERMS OF FUTURE REPAYMENT AND THE AMOUNT OF PAYMENT PER PAYMENT PERIOD (E.G., MONTHLY PAYMENTS)?

Yes. . . . . 1 — 63
No 2

BASIC EDUCATIONAL OPPORTUNITY GRANT

43A. WAS YOUR 1979-80 BEOG APPLICATION REJECTED WITH A COMPUTER MESSAGE REQUESTING CLARIFICATION OR COMPLETION OF THE APPLICATION DATA?

Not Applicable--didn't apply for a Basic Grant (skip to Q.46a). . 1
Yes. . . . . 2 — 64
No (Skip to Q.44a) 3

43B. DID YOU CLARIFY OR COMPLETE THE INFORMATION AND RECEIVE A STUDENT ELIGIBILITY INDEX?

Yes. 1
No . . . . . 2 — 65

43C. WHY NOT? _____ 66-67
_____ 68-69
_____

FOR OFFICE USE ONLY. LEAVE THIS AREA BLANK.

44A. HAVE YOU RECEIVED A LETTER FROM THE FEDERAL GOVERNMENT REQUESTING YOU TO PROVIDE DOCUMENTATION (SUCH AS INCOME TAX RETURNS) TO VERIFY INFORMATION REPORTED ON YOUR STUDENT ELIGIBILITY REPORT FOR 1979-80?

Yes 1
No (Skip to Q.45a). . . . 2 — 70

44B. HOW MUCH TIME DID YOU SPEND IN OBTAINING THIS INFORMATION? (If this has happened more than once, answer for the most recent time.)

[ ] hours — 71-73

44C. WAS YOUR BEOG ADJUSTED ON THE BASIS OF THIS VERIFICATION?

No. 1
Yes, the BEOG was increased . . . . . 2 — 74
Yes, the BEOG was decreased 3

11-12-"04"

45A. DID YOU SUBMIT A CORRECTION AND/OR A SUPPLEMENTAL FORM ON YOUR BEOG APPLICATION? (Circle one reponse.)

Yes, I submitted a correction. 1
Yes, I submitted a supplemental form . . . 2
Yes, I submitted both. . . . . 3 — 13
No (Skip to Q.46a) 4

45B. WHY DID YOU SUBMIT THIS CORRECTION OR SUPPLEMENTAL FORM? (Check all that apply.)

Change of name . . . . . [ ] — 14
Change of address. . . . . [ ] — 15
Incorrect information reported on my Student Eligibility Report . . . . . [ ] — 16
Divorce. . . . . [ ] — 17
Separation . . . . . [ ] — 18
Death (of parents or spouse) . . . . . [ ] — 19
Loss of employment due to disaster or disability . [ ] — 20
Other _____ (specify) . . . [ ] — 21

22-23 [ ]

45C. ON THE BASIS OF THIS CHANGE IN YOUR APPLICATION, DID YOU BECOME, OR STAY ELIGIBLE FOR BEOG?

Yes. 1
No . . . . . 2 — 24

45D. DID YOUR FINANCIAL AID COUNSELOR SUGGEST THAT YOU MAKE THIS CHANGE?

Yes. 1
No . . . . . 2 — 25

45E. DID YOUR FINANCIAL AID COUNSELOR ASSIST YOU IN MAKING THIS CHANGE?

Yes. 1
No . . . . . 2 — 26

FOR OFFICE USE ONLY. LEAVE THIS AREA BLANK.

GUARANTEED STUDENT LOAN

46A. DID YOU ATTEMPT TO OBTAIN A GUARANTEED STUDENT LOAN THIS YEAR -- THAT IS, 1979-80?

Yes . . . . . 1 | 27

No 2

46B. WHY NOT? (Check *all* that apply.)

- I did not need it . . . . . ☐ | 28
- I did not think I could qualify because my/my parents' income was too high . . . . . ☐ | 29
- I did not want to take on a debt. . . . . ☐ | 30
- The forms were too difficult for me to complete . ☐ | 31
- I could not find a lender . . . . . ☐ | 32
- Other _____ (specify) . . ☐ | 33

34-35 ☐

****
* Questions 48A-49 are for students who applied for a Guaranteed Student Loan this year. If you did not apply, you have completed this questionnaire. Thank you for your cooperation. *
****

47A. DID YOU RECEIVE A GUARANTEED STUDENT LOAN THIS YEAR?

Yes . . . . . 1 | 36

Applied but have not heard . 2

No 3

47B. WHY NOT? (Check *all* that apply.)

- Application process too long and/or complex . . . ☐ | 37
- Lender rejected me because my family was not an established customer . . . . . ☐ | 38
- Lender rejected me because I was a Freshman . . . ☐ | 39
- Lender rejected me because I was enrolled in vocational courses . . . . . ☐ | 40
- Lender rejected me because I did not qualify for interest subsidy . . . . . ☐ | 41
- Other _____ (specify) . . ☐ | 42

43-44 ☐

Thank you for your cooperation. You have completed this questionnaire.

49. WHAT WAS THE AMOUNT OF THE GUARANTEED STUDENT LOAN(S) YOU RECEIVED THIS YEAR?

$ ☐ | 45-48

THANK YOU FOR YOUR COOPERATION, YOU HAVE COMPLETED THIS QUESTIONNAIRE. IF YOU WOULD LIKE TO COMMENT, PROVIDE MORE INFORMATION, OR TELL US ABOUT PROBLEMS YOU'VE HAD IN FINANCING YOUR EDUCATION, WE WELCOME ANY ADDITIONAL INFORMATION YOU CAN PROVIDE.

APPLIED MANAGEMENT SCIENCES

962 Wayne Avenue • Suite 701 • Silver Spring, Maryland 20910
Telephone 301 585-8181

November 16, 1979

Dear Student:

A few weeks ago, you were sent a questionnaire about how you are financing your education in order to help the U.S. Office of Education understand how student aid programs are working and how they might be improved and/or expanded. As we indicated in our earlier correspondence, it is important that you respond regardless of whether or not you are presently receiving aid in order that the government obtain accurate information on the current distribution of student financial aid and the need for these funds in the future. Moreover, the student assistance programs will be undergoing reauthorization early next year, and it is essential that changes be made on the basis of the most complete and accurate information possible.

The form can be completed in less than twenty minutes. For your time, we will send you $3.00 upon receipt of the completed questionnaire. If you have lost the form or if you have any questions, please call Wendy Dellefield at our toll-free number, 800-638-2784.

Thank you very much for your time and help.

Sincerely,

APPLIED MANAGEMENT SCIENCES, INC.

Robert T. Deane

Robert T. Deane, Ph.D.
Vice President

RD/cn

APPLIED MANAGEMENT SCIENCES

962 Wayne Avenue • Suite 701 • Silver Spring, Maryland 20910
Telephone 301 585-8181

January, 1980

Hello Again!

Remember us? We sent you a questionnaire earlier this school year about how you are financing your education as part of a nationwide study for the U.S. Office of Education. According to our records, this questionnaire is either gathering dust on your desk, occupying valuable space in your bureau drawer, or was shredded for confetti for your last New Year's Eve party. Whatever your reason for not responding, please consider the following. You are missing an opportunity to pick up an easy $3.00, and the longer you wait, the less it will buy. Also, the study's results will be greatly enhanced by the return of your completed questionnaire - the more student respondents, the greater the reliability and accuracy of the information we collect. In this way, you (whether you are an aid recipient or a non-recipient) will provide the Congress with data on which to base their policies regarding the future form and funding of student financial aid programs. This is your big chance to be heard - so why blow it?

Perhaps you have already mailed back your questionnaire and are wondering why we've sent you this notice. This may be because the institution or student ID numbers on the cover page were removed or obscured. If this is the case, we are unable to use the response because the information you provided cannot be matched to the student aid policies of the school you attend. Additionally, we are unable to identify your response in order to send you the $3.00 for your efforts. As we noted in our earlier correspondence, once we mail your check, we will destroy all records of your name and address. SO, PLEASE DO NOT REMOVE THE COVER PAGE OR OTHERWISE TAMPER WITH THESE NUMBERS.

(over)

If you have already mailed back your completed questionnaire (with all identifiers intact), please disregard this notice and accept our sincere thanks. Your $3.00 will soon be on its way. If you have lost the form or have any questions, please call Wendy Dellefield at our toll-free number, 800-638-2784.

Thanks again for your time and assistance.

Sincerely,

APPLIED MANAGEMENT SCIENCES, INC.

Michael J. Puma

Michael J. Puma
Project Director

MJP:wmm

APPENDIX B

INSTITUTIONAL STUDENT SAMPLING PROCEDURES

TO: SISFAP COORDINATORS AT INSTITUTIONS PARTICIPATING IN THE FOLLOW-UP STUDY OF EFFECTS OF MISAA

FROM: Mr. Michael J. Puma. Project Director

DATE: September 6, 1979

SUBJECT: 1979-80 Field Work and Student Sampling

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1. General Information

Thank you for your continuing interest in this research. We have tentatively scheduled a visit to your school on the dates noted in the box, below right. These visits will not involve contact with students or extensive interviews with school personnel. Our work will be restricted to extracting financial aid data for those students in the sample who are recipients. We want to meet briefly with you, but if this is inconvenient at the time of the site visit our questions can be handled later by telephone. For these reasons, we do not expect many scheduling conflicts. If you sense a possible problem, give us a call (see WATS number, below).

INSTITUTION:

TENTATIVE VISITATION DATES:

Please complete the selection of students as quickly as you can; names and addresses are needed so that we can send questionnaires directly to the students.

As soon as the completed sample is available, please mail a copy of the listing to us at the following address:

G-129 MISAA Followup Survey
Applied Management Sciences, Inc.
962 Wayne Avenue
Silver Spring, Maryland 20910

Hold the original listing and all associated work sheets, including this memorandum, for use by our field representative in the work on-site at your school.

FOR ASSISTANCE: CALL OUR TOLL-FREE NUMBER: 800-638-2784, BETWEEN THE HOURS OF 8:30 AND 5:30 EASTERN TIME, AND ASK FOR DICK ELLIS, MARK COOPER, OR MIKE PUMA.

Detailed instructions for sampling follow.

2. Selecting the Sample of Students

The sample is to be of all currently enrolled, half-time or more, undergraduate students. For every student sampled, we will need an ID number, name, and current mailing address. The address should be the one used by the student while in school this Fall, so that questionnaires can reach them with a minimum of forwarding. We have supplied forms that can be used to record these data (the Revised Sample Listing of Students, attached). If it is easier to supply the information in some other form, please feel free to do so. If computer-generated address labels can be supplied, this would be appreciated.

The estimate we have of your school's total half-time or better undergraduate enrollment is entered in Box (1) at the right. If this number is incorrect, it may affect the size of the sample and it will definitely affect the calculated sampling interval, below. Correct the figure and call us to obtain adjustments for the interval.

(1) ESTIMATED TOTAL UNDERGRADUATE ENROLLMENT, HALF-TIME OR MORE

The figure in Box (2) is our calculated sample size for your school. The sampling interval is derived by dividing (1) by (2); that result has been entered in Box (3).

(2) TOTAL SAMPLE SIZE

(1) ÷ (2) = (3) SAMPLING INTERVAL

To sample, you will need a list of all the half-time or better undergraduates currently enrolled at your school (if your total enrollment is 80 or less, no sampling need be done; we will survey all students). Sampling will require the following steps:

a) Clean the list. That is, make certain it contains only half-time or more undergraduates.

b) Select a random start. Choose a number randomly between one and ten, inclusive (one way to do this is to ask someone else to pick the number). Suppose the number is "4." Take the list and count off the first four cases. The next case is the random start.

c) Select cases. Beginning with the random start, count off the number of cases specified by the sampling interval. Suppose the interval is "10." Continuing the above illustration, the first four cases were passed to reach the random start. The count begins with the fifth case and the 14th case will be the first sampled. You would continue taking every tenth case (or 16th, or 20th, or whatever the interval dictates). The sample in the illustration would consist of the 14th, 24th, 34th, etc. cases. If more cases

are needed after reaching the end of the list, return to the "top" of the list and continue the count, skipping those previously selected.

d) List selected cases in the Revised Sample Listing. Assign each a three-digit ID number, beginning with 001, 002, etc. Check off whether each case is an aid recipient or not, and enter current mailing addresses (these do not need to be entered if separate address labels have been supplied).

When you have reached this point, count the total number of aid recipients in the Revised Sample Listing and enter this total in Box (4). Next, divide the sample size (Box 2) in half, and enter this number (fractional results can be rounded down to the next whole number) in Box (5). If (4) is equal to or greater than (5), you are finished. If (4) is less than (5), enter the difference in Box (6). This is the number of extra aid recipients we will need in addition to those already sampled. To select these extra cases, enter an estimate of the number of students at your school who are aid recipients in Box (7). Divide (7) by (6). The result, entered in Box (8), is the sampling interval for extra recipient cases. These can be selected by applying this interval to your own files, assuming you keep one file per student. If students have more than one file (for example, separate files for separate aid programs), call us for further instructions. Note that the students previously selected should be skipped in this count.

CHECK: the total number of students in the Revised Sample Listing should now be equal to the Total Sample Size (Box 2) plus any extra recipient cases (Box 6).

(4) AID RECIPIENTS IN THE SAMPLE:

(5) ONE-HALF OF TOTAL SAMPLE: (Box 2, divided by two)

(5) - (4) = (6) DIFFERENCE:

(7) TOTAL NUMBER OF AID RECIPIENTS AT YOUR SCHOOL

(7) - (6) = (8) SAMPLING INTERVAL (EXTRA RECIPIENTS)

(INSERT USED FOR SCHOOLS PARTICIPATING IN BASELINE STUDY AND WHICH WERE FOUR YEAR)

2. Selecting the Sample of Students

The sample should closely resemble the student sample taken last Spring. In particular, it should include as many of the students who participated before as possible. To accomplish this, the procedures for this year's sampling are somewhat different.

For every student sampled, we will need an ID number, name, and current mailing address. The address should be the one used by the student while in school this Fall, so that questionnaires can reach them with a minimum of forwarding. We have supplied forms that can be used to record these data (the Revised Sample Listing of Students, attached). If it is easier to supply the information in some other form, please feel free to do so. If computer-generated address labels can be supplied, this would be appreciated.

Your Total Sample Size is given in Box (1) at the right, and will include three kinds of students:

(1) TOTAL SAMPLE SIZE

CARRYOVER CASES. These are students who participated in the study last Spring. They are identified in the original roster for that survey, enclosed with this memorandum. Take this roster and cross off the students who are not currently enrolled, half-time or more, as undergraduates. Then transfer the remaining names and their original ID numbers to the Revised Sample Listing. Count the number of these Carryover Cases and enter this total in Box (2) at the right.

(2) CARRYOVER CASES:

NEW FIRST-YEAR STUDENTS. These must be sampled anew. The number needed for the revised sample is given in Box (3). In Box (4), enter the total number of new first-year, half-time or more, undergraduates enrolled at your school. Next, divide (4) by (3). The result, rounded down to the nearest whole number, is the sampling interval for new first-year students. Enter this interval in Box (5). The sample of these students can now be drawn, using either:

(3) FIRST-YEAR CASES:

(4) FIRST-YEAR ENROLLMENT:

(4) ÷ (3) = (5) SAMPLING INTERVAL (1ST YEAR CASES)

- a list of new first-year, half-time or more, undergraduates, or
- a list of all half-time or more undergraduates, annotated to show class level, and skipping the upperclass students in the count.

Sampling should follow procedures outlined in Section 3 of this memorandum, below. Enter the selected students on the Revised Sample Listing, and assign them ID numbers in the 500-699 range (e.g., the first case is 501, the second is 502, etc.)

NEW UPPERCLASS STUDENTS. Add together the numbers in Boxes (2) and (3), and subtract this total from the overall sample size given in Box (1). The result, which should be entered in Box (6) at the right, is the number of additional upperclass cases needed to complete the sample. In Box (7), enter the total number of upperclass undergraduates enrolled half-time or more at your school. Next, divide (7) by (6); the result, rounded down to a whole number, is the sampling interval for new upperclass students. Enter the interval in Box (8). The sample of these students can now be drawn, using either:

- a list of upperclass undergraduates enrolled half-time or more, or
- a list of all half-time or more undergraduates, annotated to show class level, and skipping first-year students in the count.

Sampling again follows procedures outlined in Section 3, below. Enter the selected students on the Revised Sample Listing, and assign them ID numbers in the 700-899 range (e.g., the first case would be 701, the second 702, etc.)

LAST: Divide the total sample size (in Box 1) in half, and enter the result, rounded down to the nearest whole number, in Box (9). Now, take the entire Revised Sample Listing and count the number of current aid recipients that have been selected, and enter this total in Box (10). If this number is equal to or greater than the amount in Box (9), the sampling has been completed. If it is less than the amount in Box (9), enter the difference in Box (11). This is the number of extra recipients needed, in addition to those already sampled. To select these cases,

(6) NEW UPPERCLASS CASES:

(7) TOTAL UPPERCLASS ENROLLMENT:

(7) ÷ (6) = (8) SAMPLING INTERVAL (UPPERCLASS CASES)

(9) ONE-HALF TOTAL SAMPLE (Box 1 divided by two)

(10) AID RECIPIENTS SAMPLED

(11) DIFFERENCE: (9) - (10)

enter an estimated number of students at your school who are aid recipients in Box (12). Divide (12) by (11). The result, entered in Box 13, is the sampling interval for extra recipient cases. These can be drawn by applying the interval to your own files, as long as you keep one file for each student. If students have more than one file (for example, separate files for separate aid programs), call us for further instructions. Note that previously sampled students should be skipped in the count.

(12)
TOTAL NUMBER OF AID RECIPIENTS AT YOUR SCHOOL

(12) ÷ (11) = (13)
SAMPLING INTERVAL (EXTRA RECIPIENTS)

CHECK STEP: the total number of students in the Revised Sample Listing should now be equal to the Total Sample Size (Box 1) plus any extra recipient cases (Box 11).

3. General Procedure for Selecting Random Samples

a) Clean the list. That is, make certain it contains only persons of the specific type to be selected (first-year students, undergraduates, recipients, etc.) and that it doesn't include persons already sampled (carryovers, etc.). A "general list" can be cleaned by simply marking it as you go along and skipping over inapplicable cases as you count off each interval.

b) Select a random start. Choose a number randomly between one and ten, inclusive (one way to do this is to ask someone else to pick the number). Suppose the number is "4." Take the list and count off the first four cases. The next case is the random start. Choose a new random start for each new round of sampling.

c) Select cases. Beginning with the random start, count off the number of cases (skipping inapplicable students as needed) specified by the sampling interval. Suppose the interval is "10." Continuing the above illustration, the first four cases were passed in reaching the random start. The count begins with the fifth case and the 14th case in the list will be the first sampled. You would continue taking every tenth case (or 16th, or whatever the interval dictates). The sample in the illustration would consist of the 14th, 24th, 34th, etc., cases. If more cases are needed after reaching the end of the list, return to the "top" of the list and continue the count, skipping those already selected.

d) List selected cases in the Revised Sample Listing, using original ID numbers for carryovers, 500-699 numbers for new first-year students, and 700-899 numbers for new upperclass students. Check off whether an aid recipient or not, and enter current mailing addresses (these do not need to be entered if separate address labels have been supplied).